

FIG. 1(a)

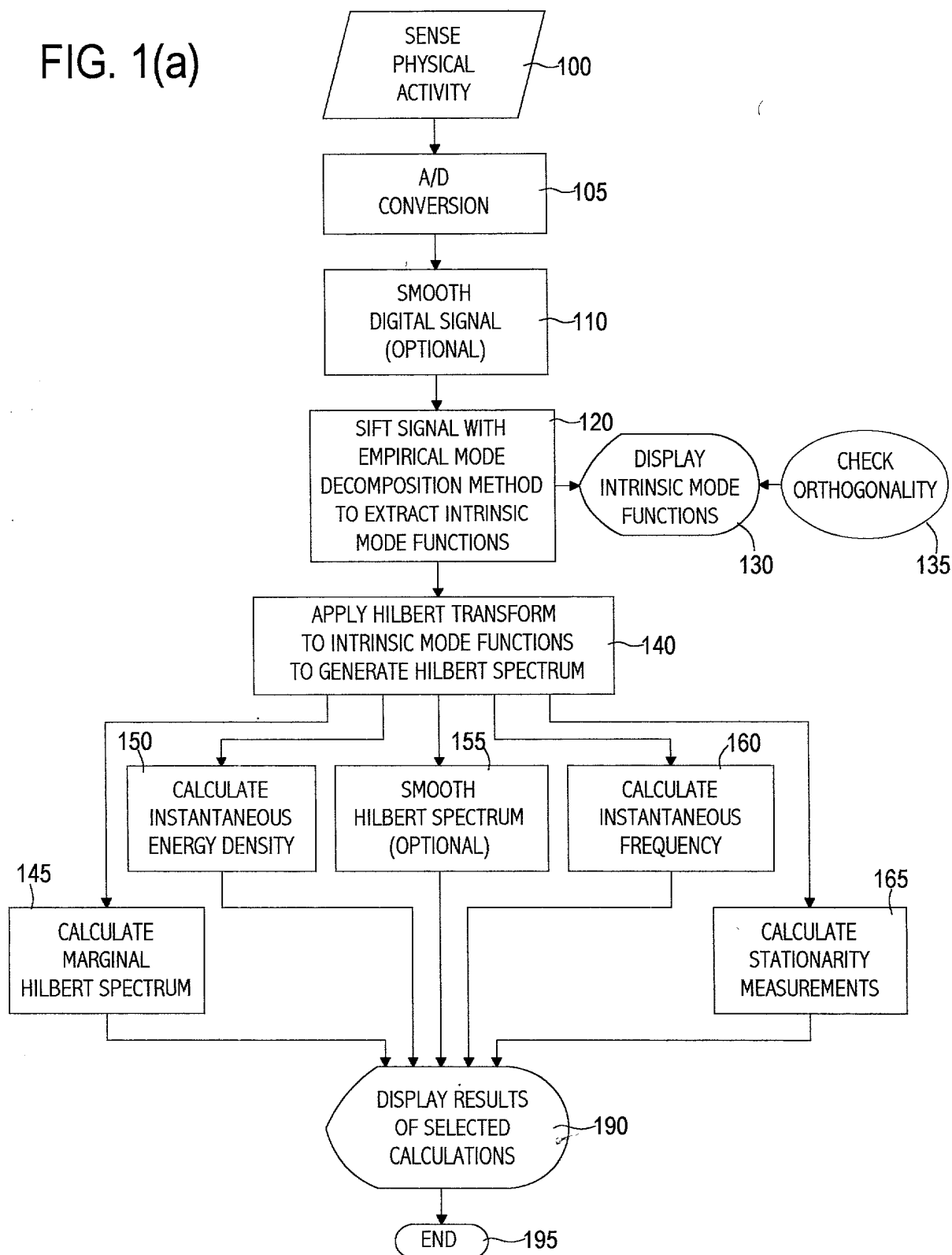


FIG. 1(b)

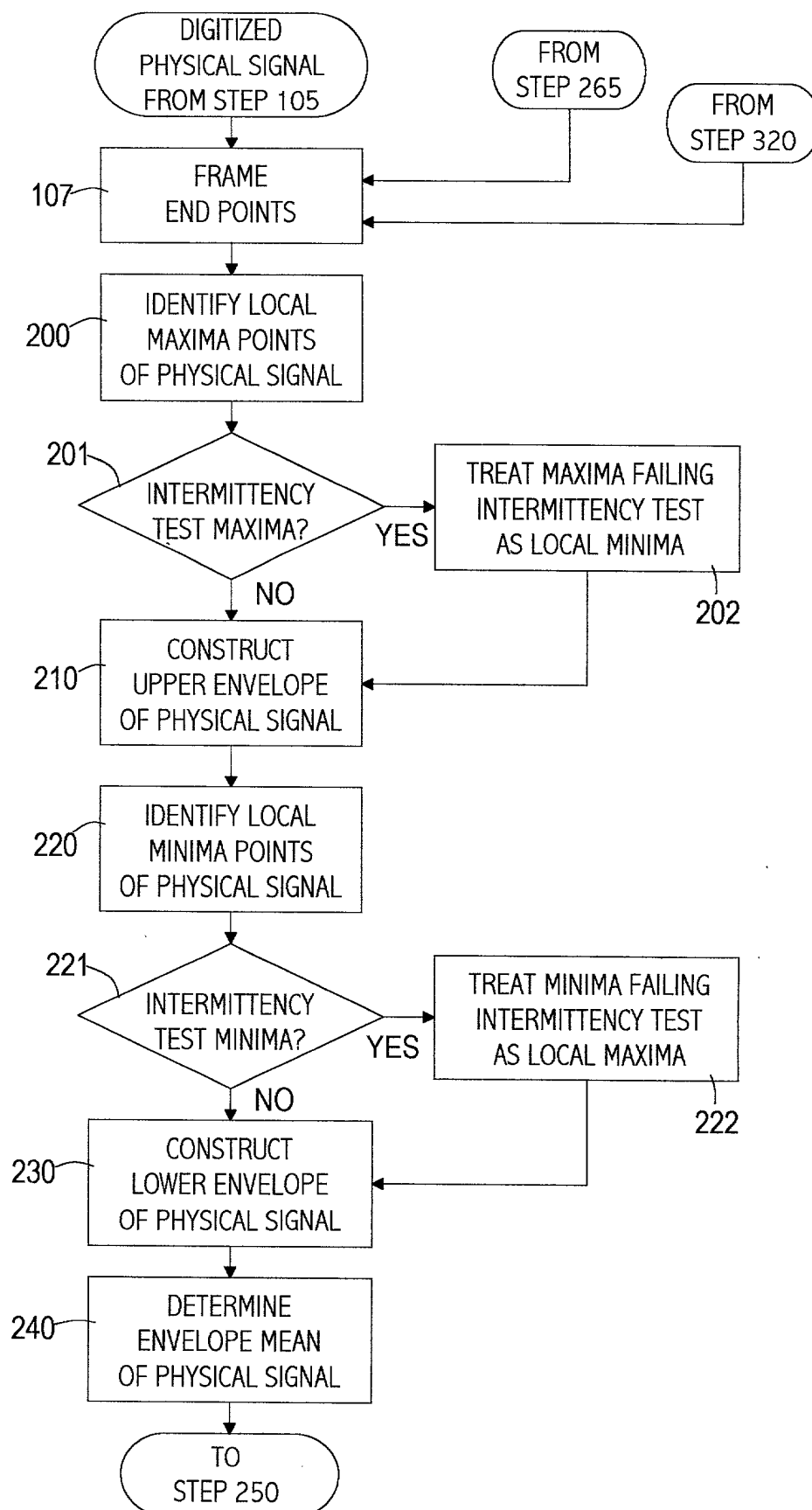
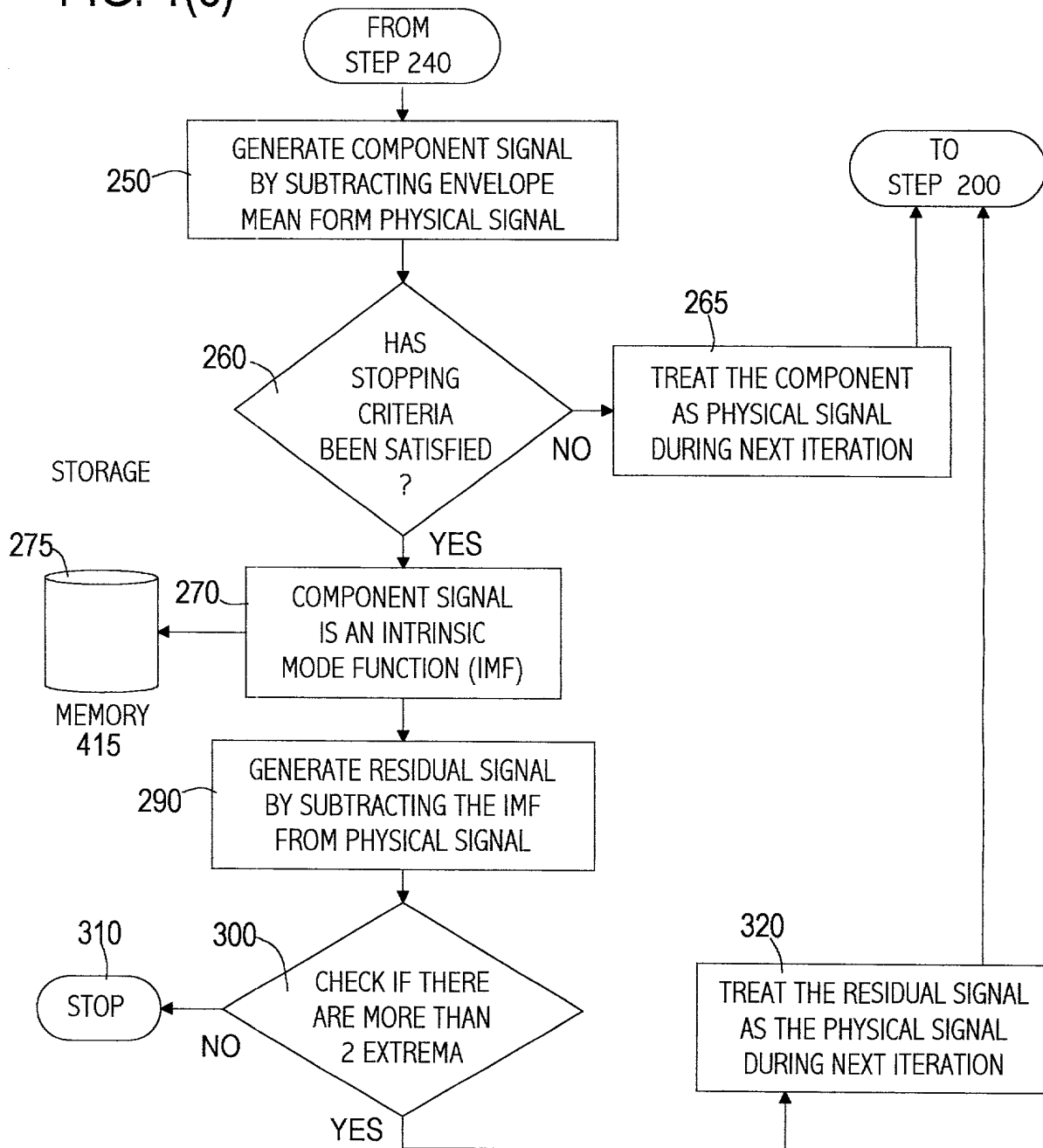


FIG. 1(c)



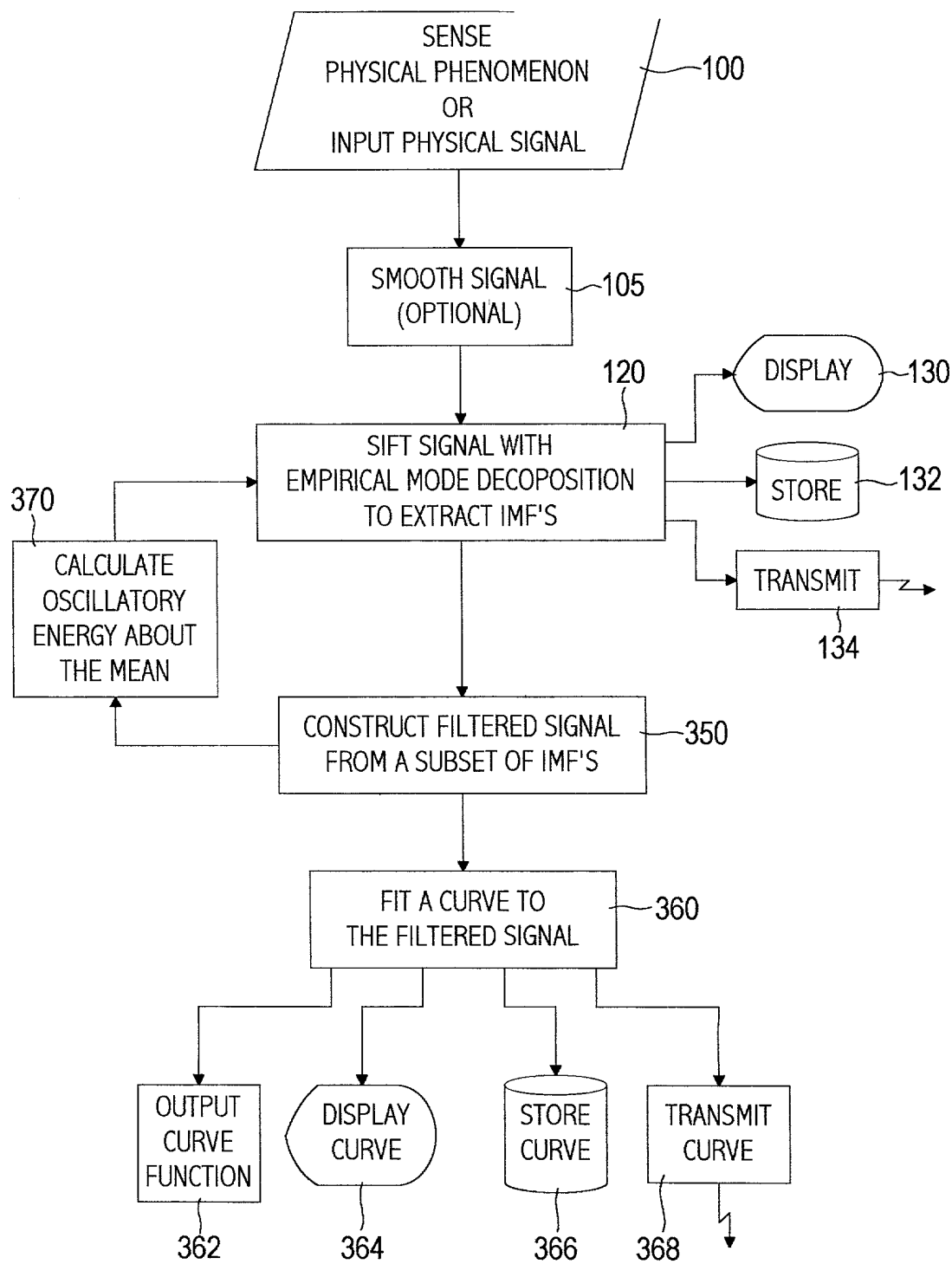


FIG. 1(d)

FIG. 2

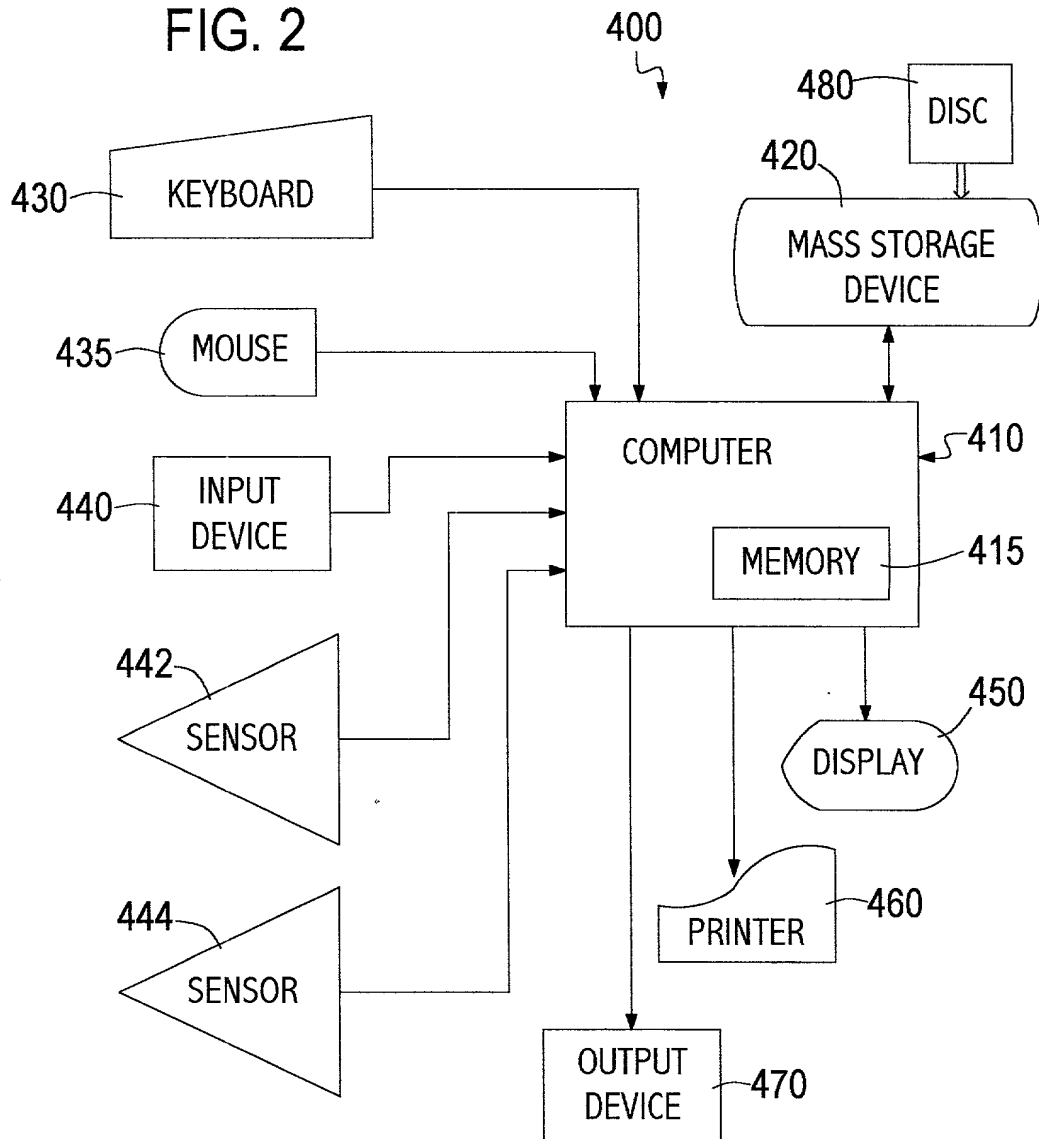


FIG. 3(a)

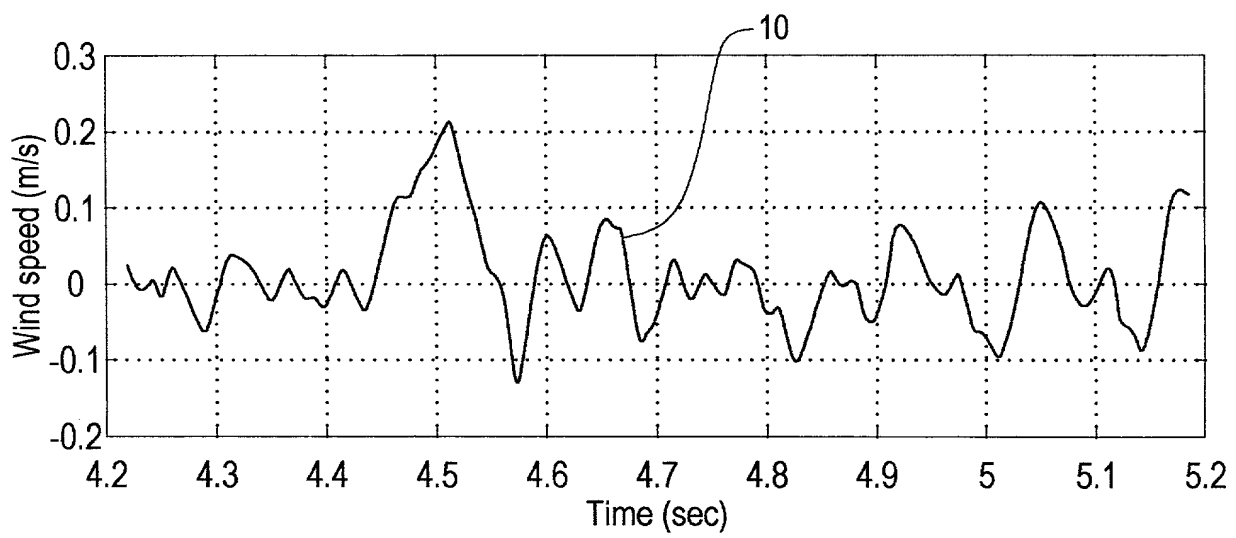


FIG. 3(b)

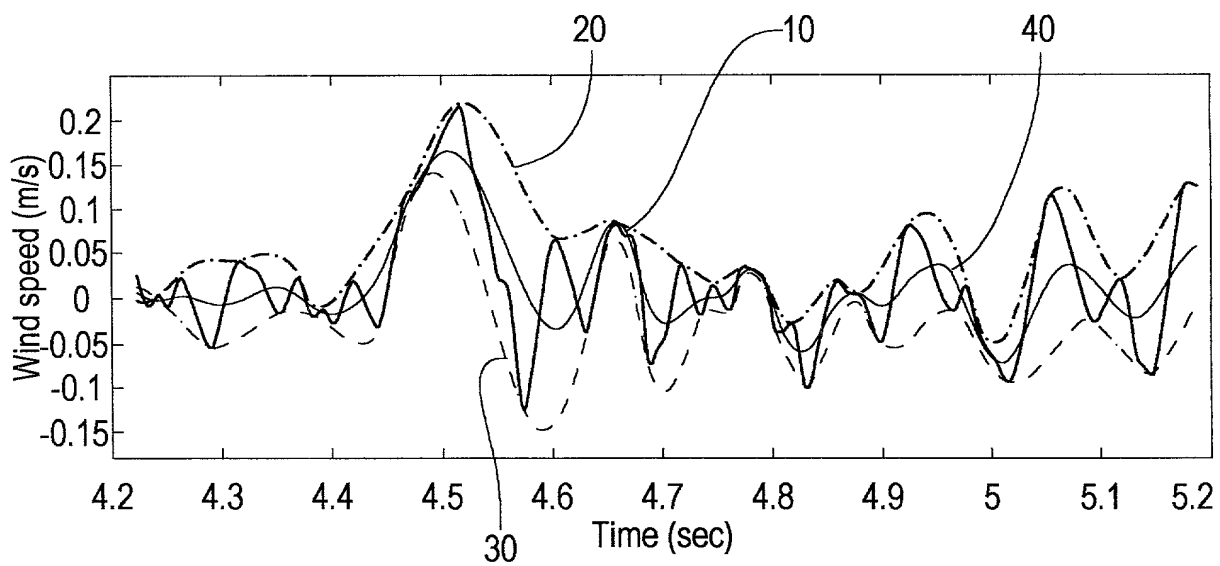


FIG. 3(c)

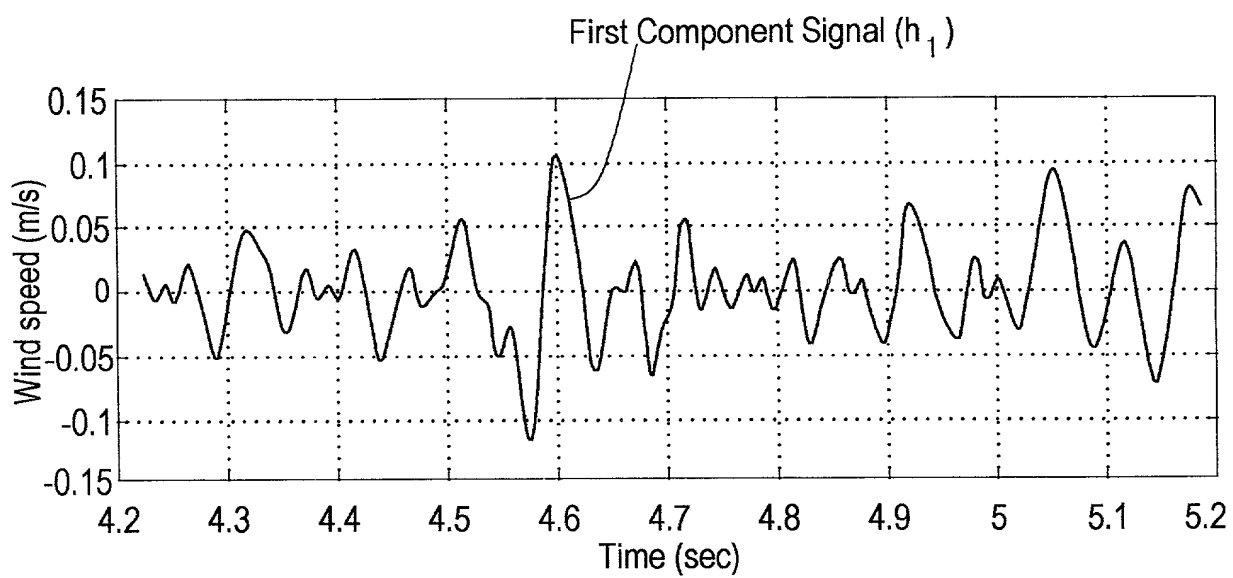


FIG. 3(d)

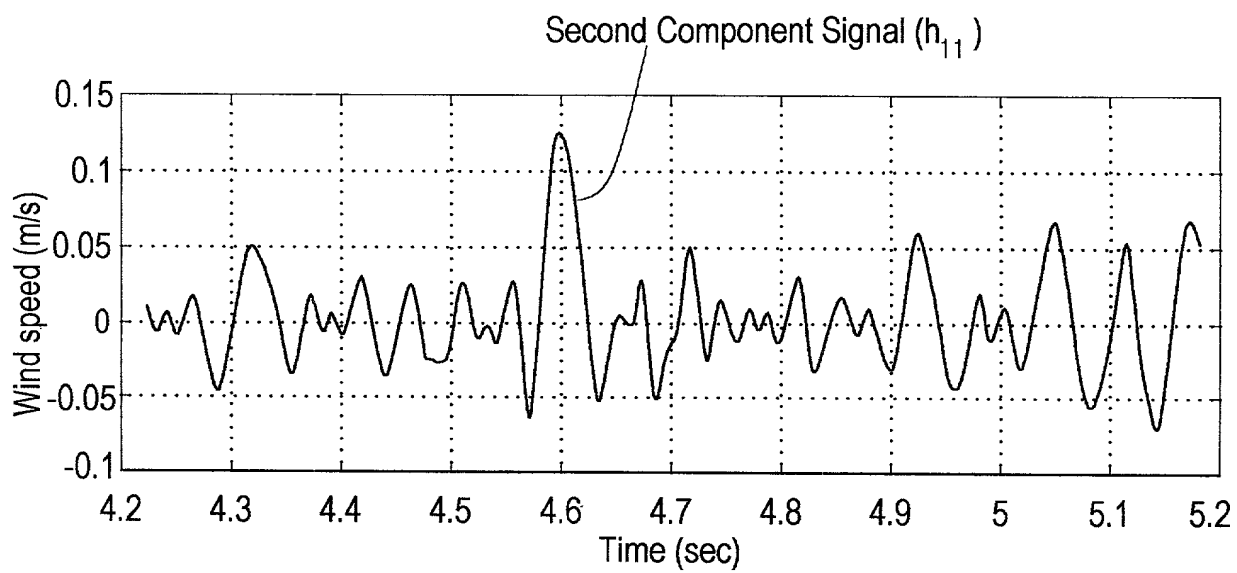


FIG. 3(e)

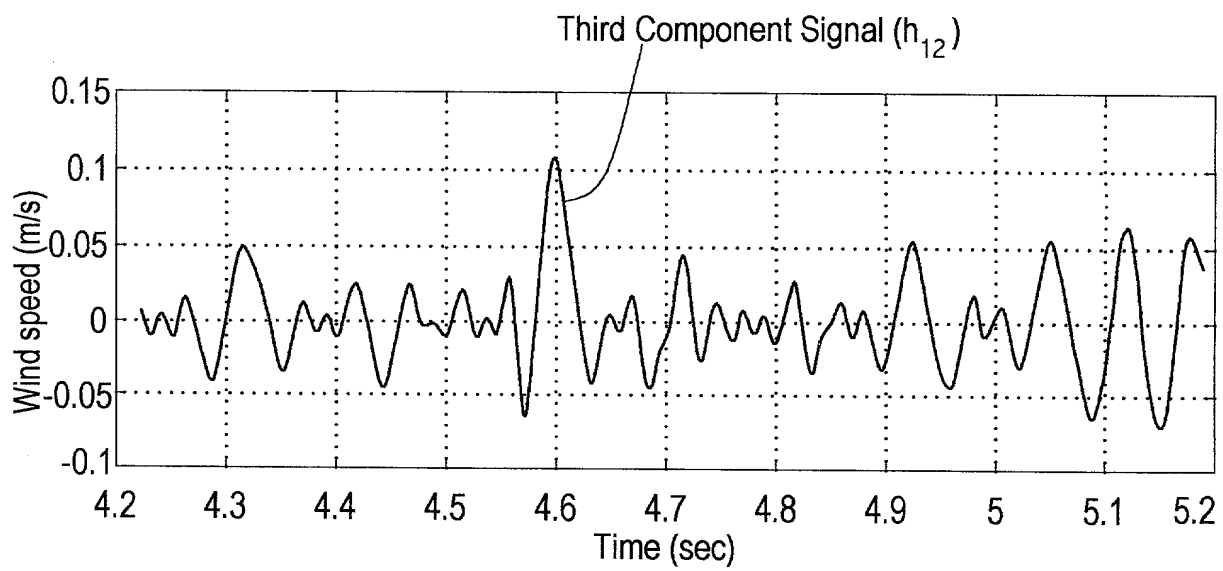


FIG. 3(f)

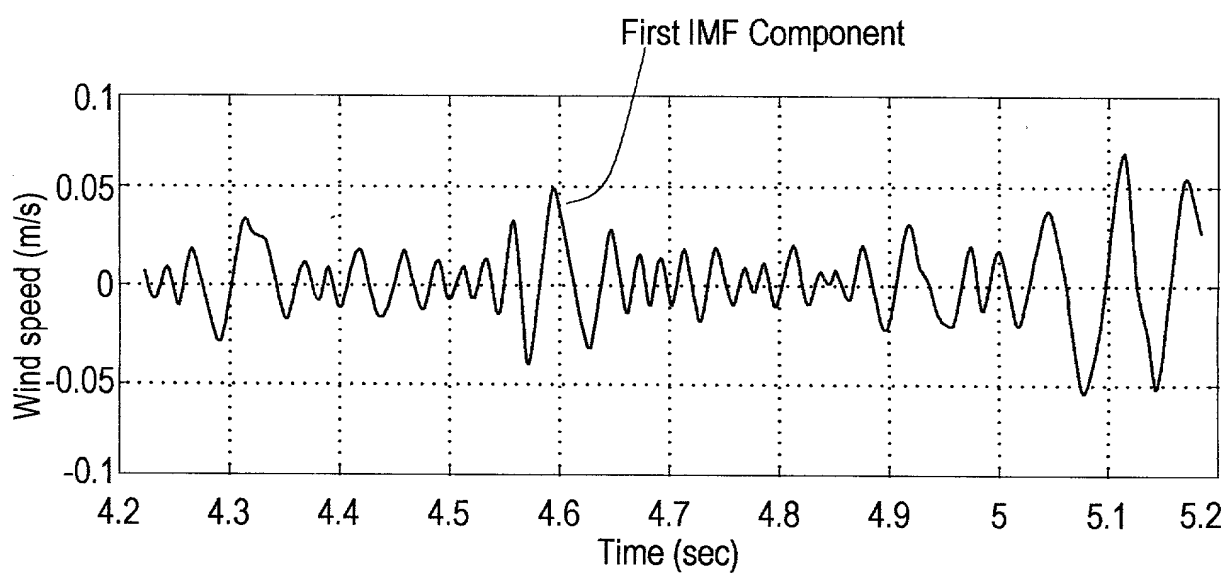
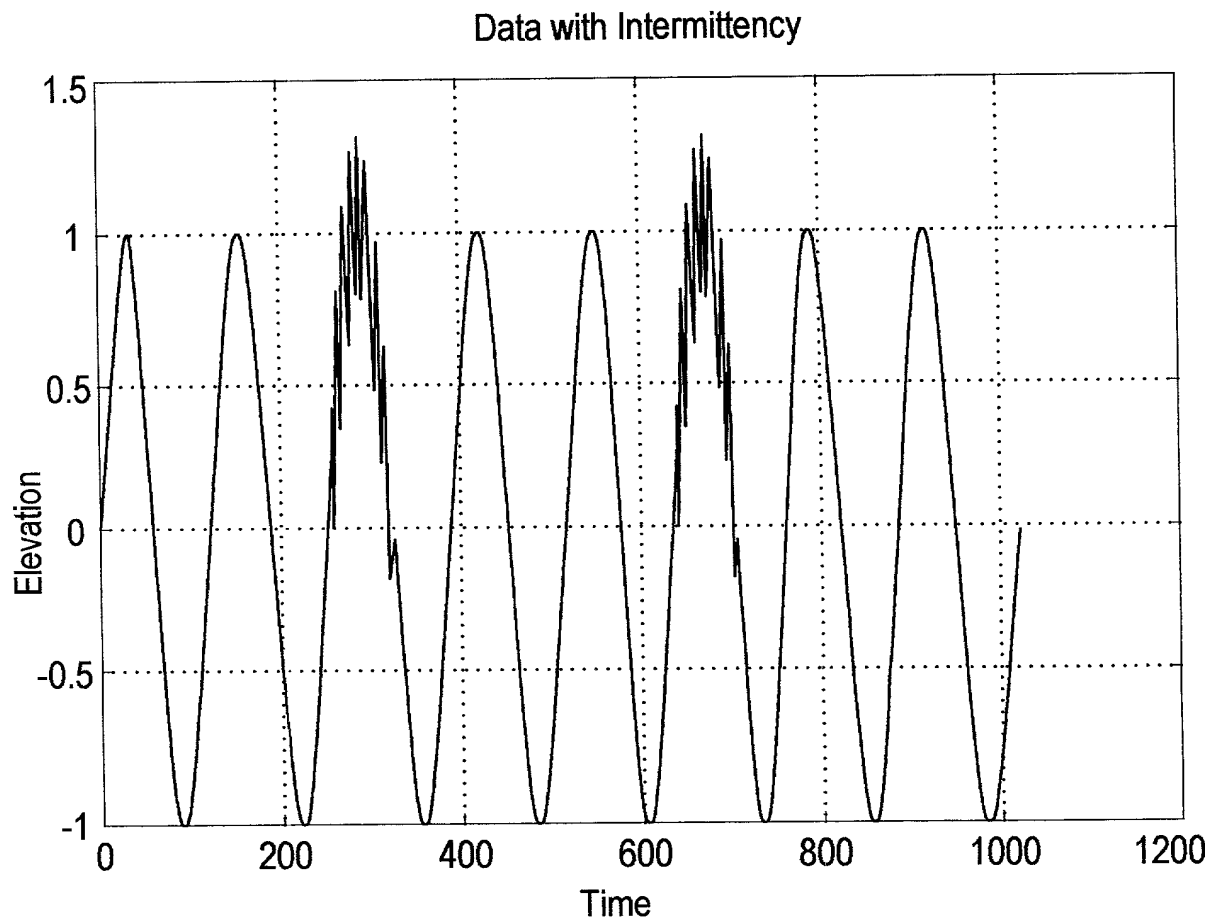


FIG. 3(g)



EMD-IMF without intermittency option

FIG. 3(h)

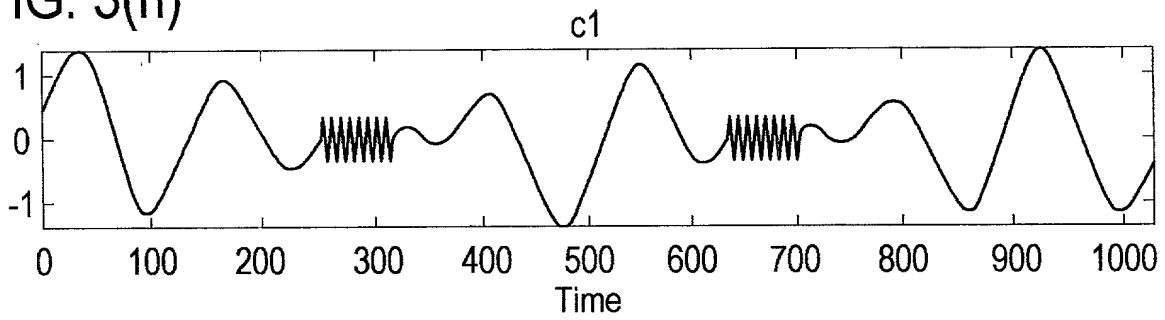


FIG. 3(i)

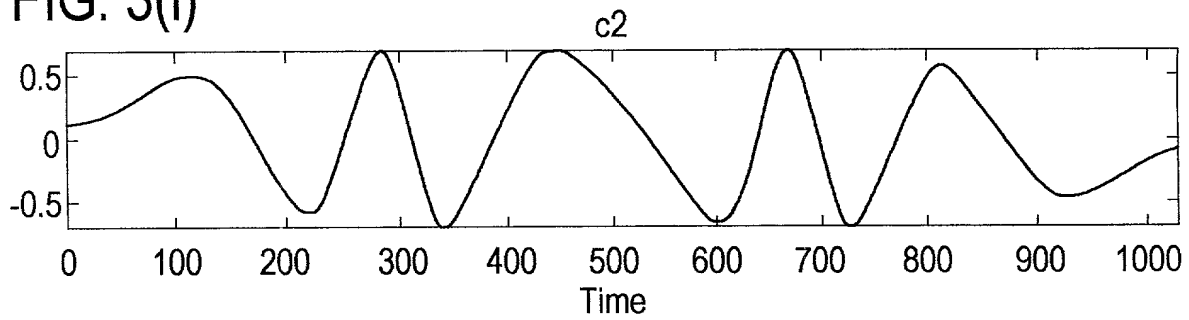


FIG. 3(j)

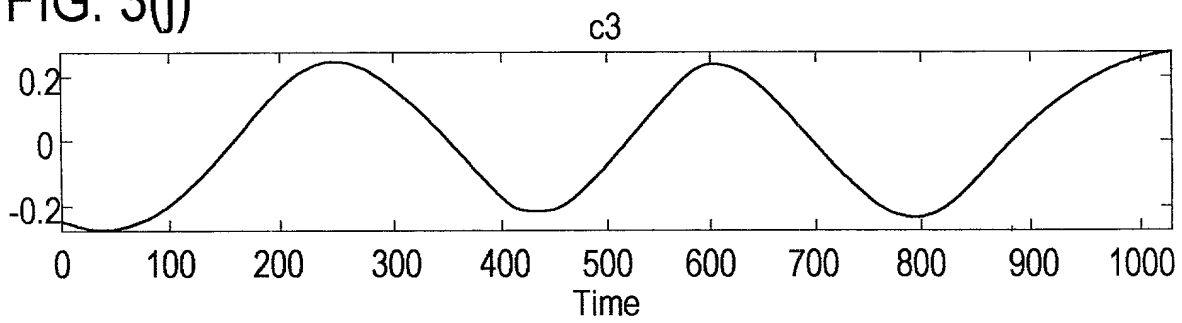


FIG. 3(k)

EMD-IMF without intermittency option

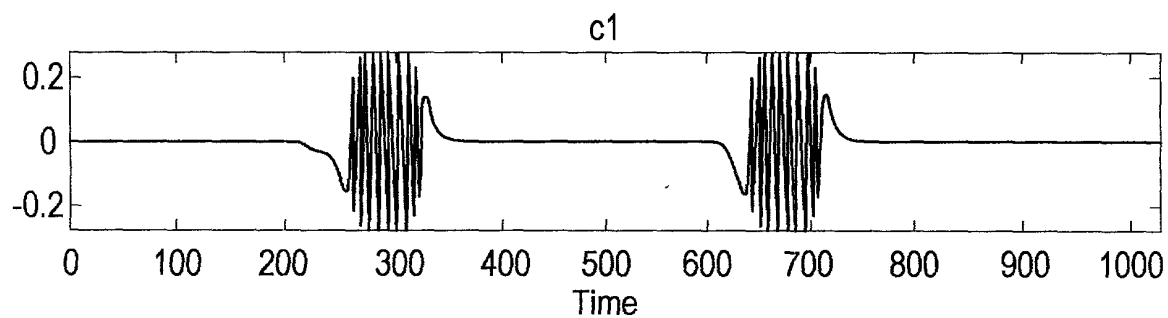


FIG. 3(l)

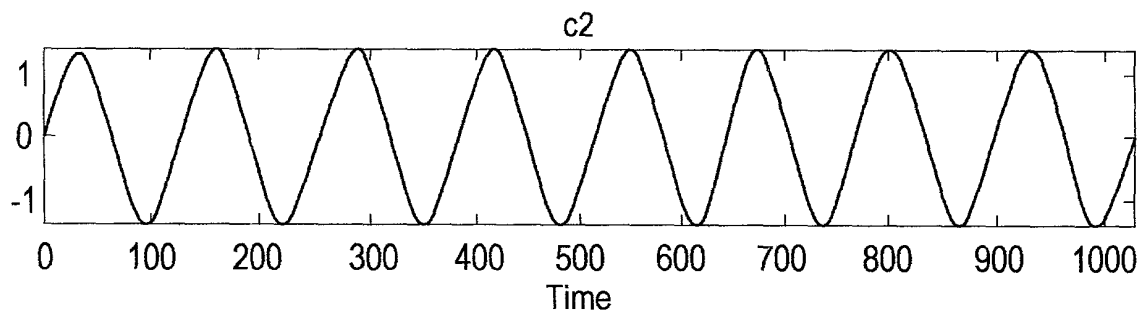


FIG. 3(m)

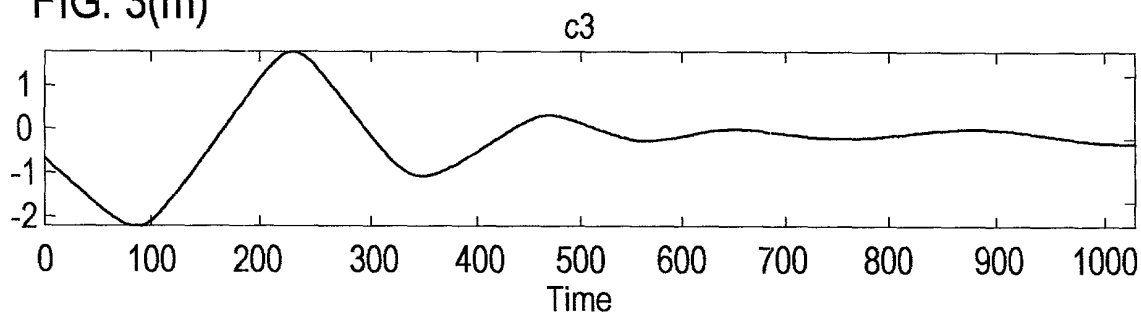


FIG. 4(a)

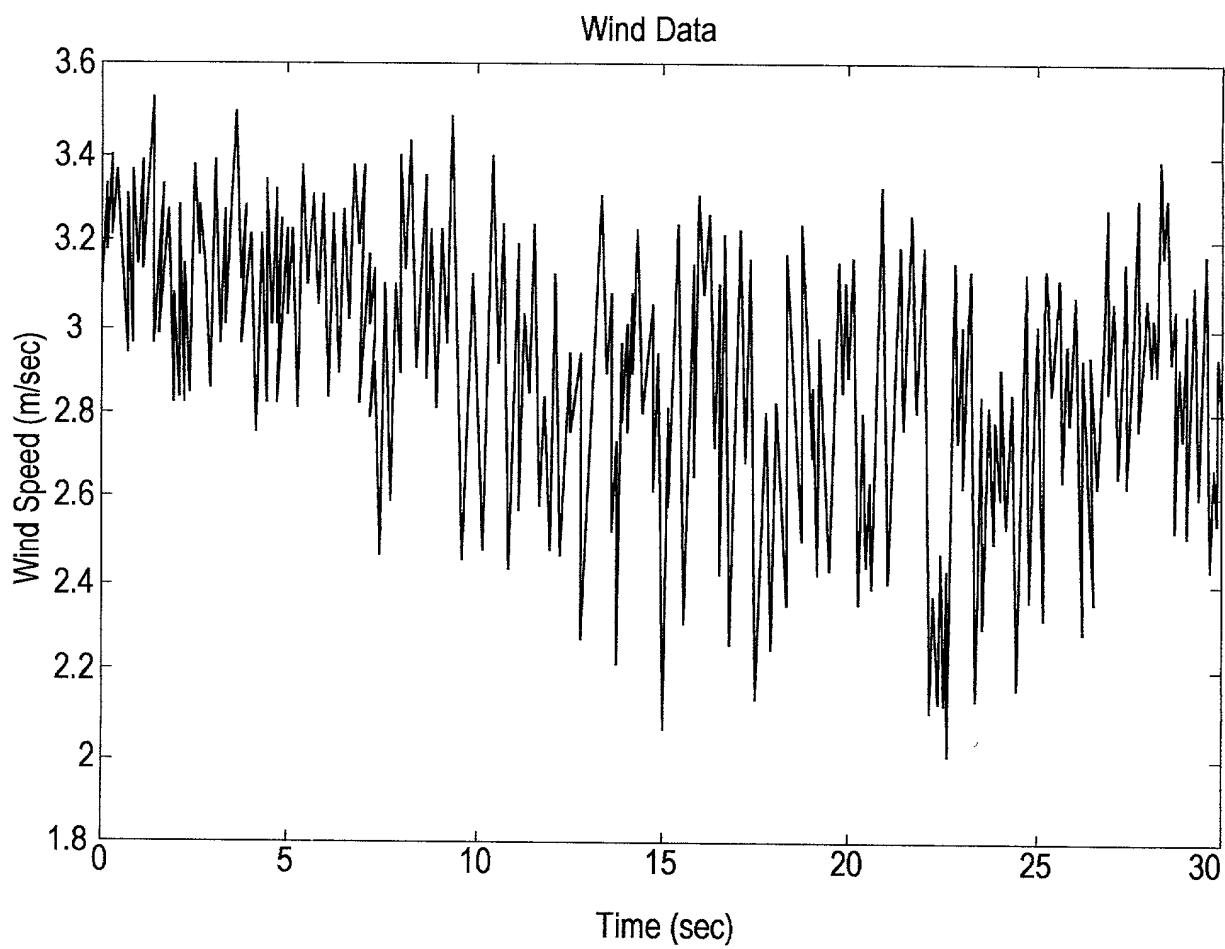


FIG. 4(b)

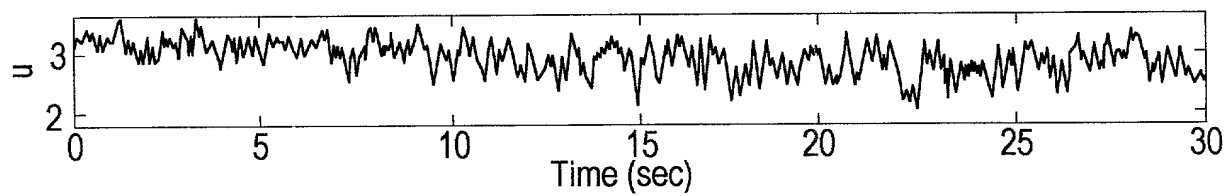


FIG. 4(c)

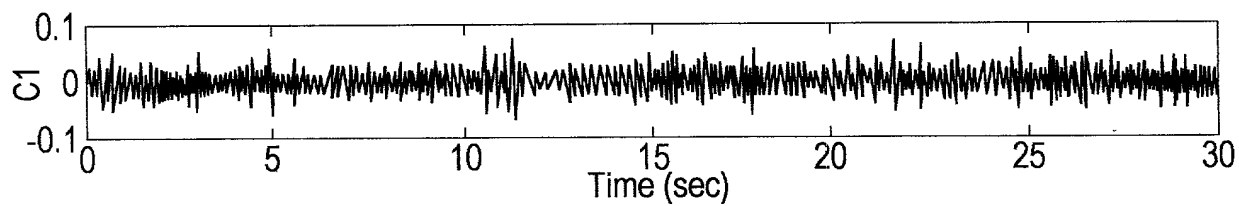


FIG. 4(d)

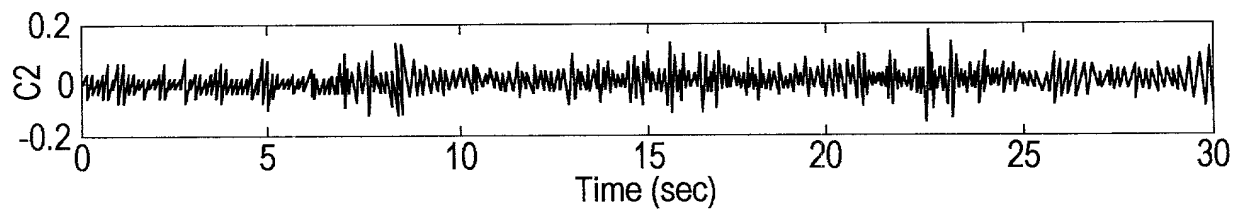


FIG. 4(e)

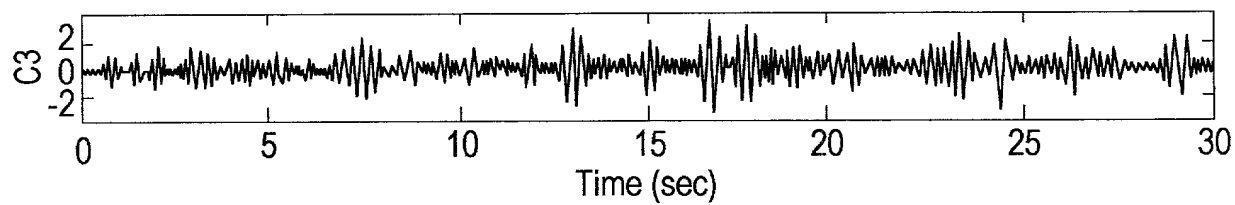


FIG. 4(f)

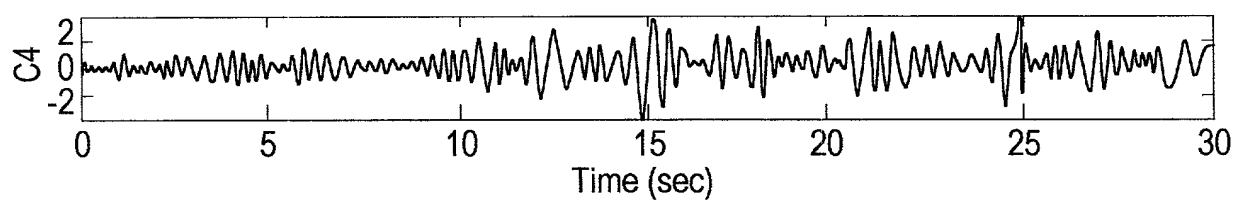


FIG. 4(g)

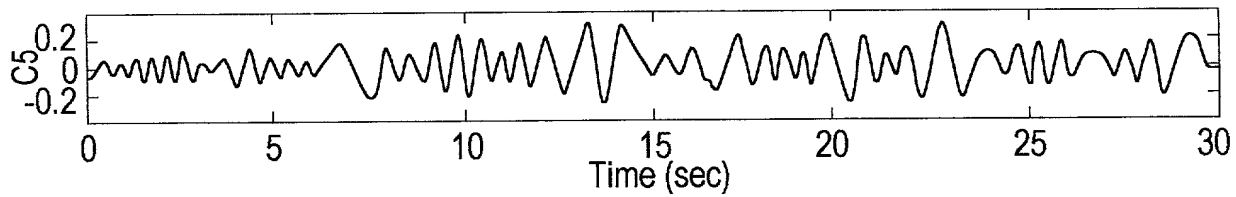


FIG. 4(h)

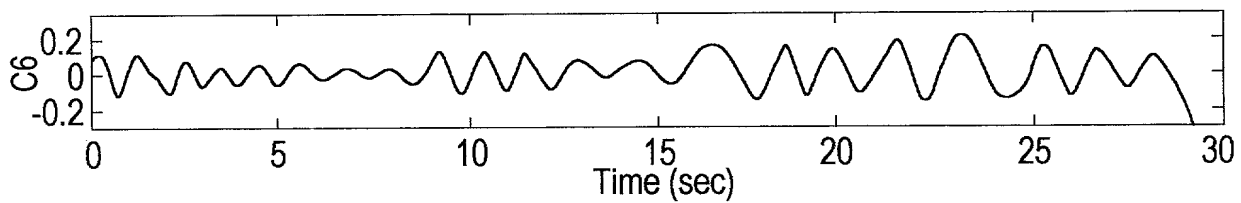


FIG. 4(i)

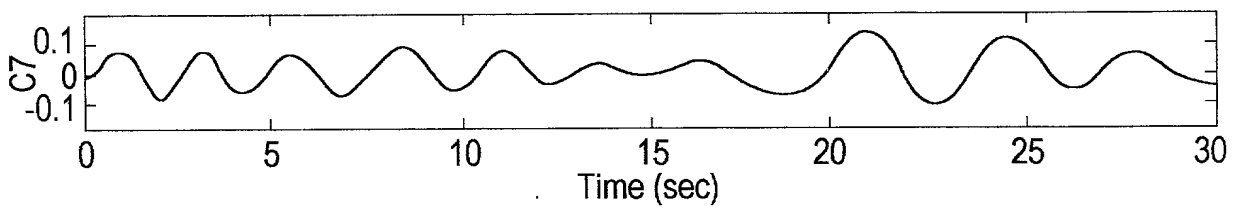


FIG. 4(j)

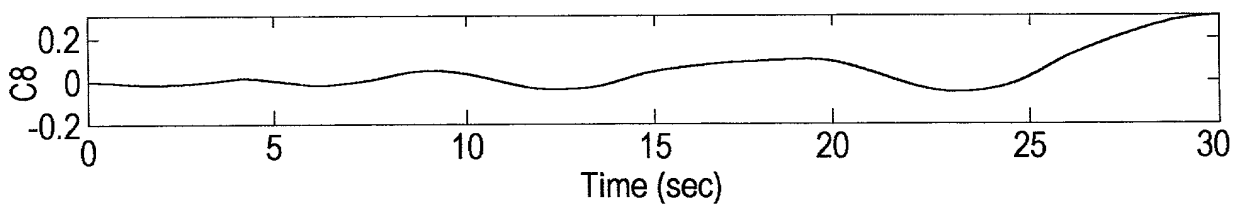


FIG. 4(k)

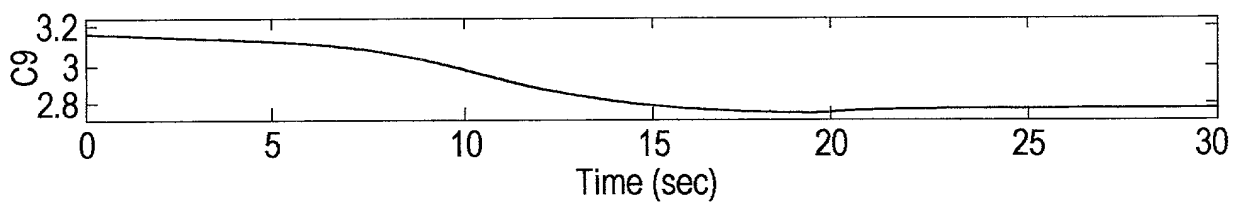


FIG. 5(a)

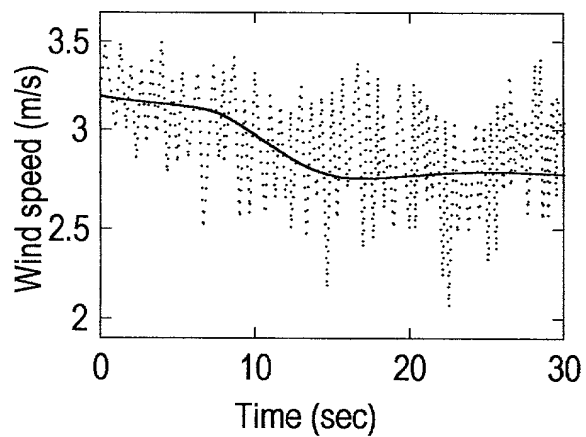


FIG. 5(b)

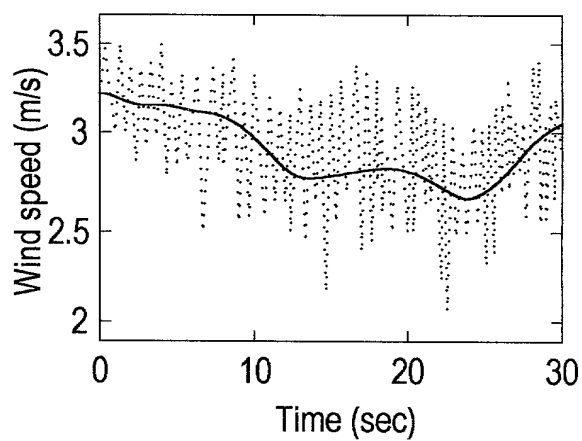


FIG. 5(c)

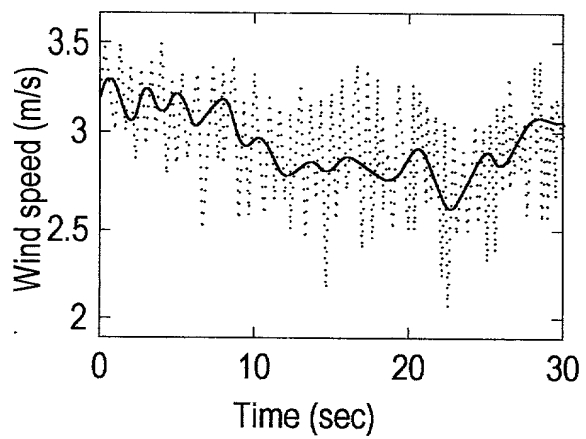


FIG. 5(d)

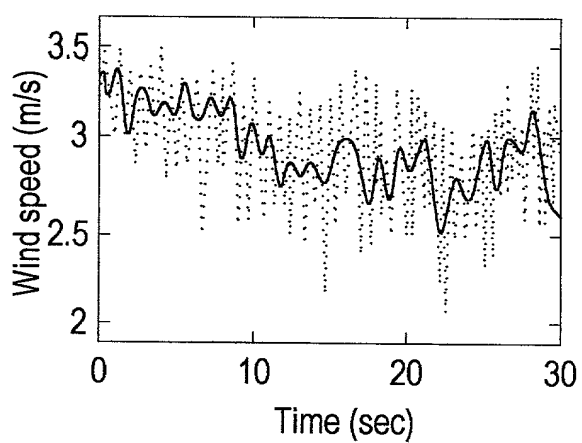


FIG. 5(e)

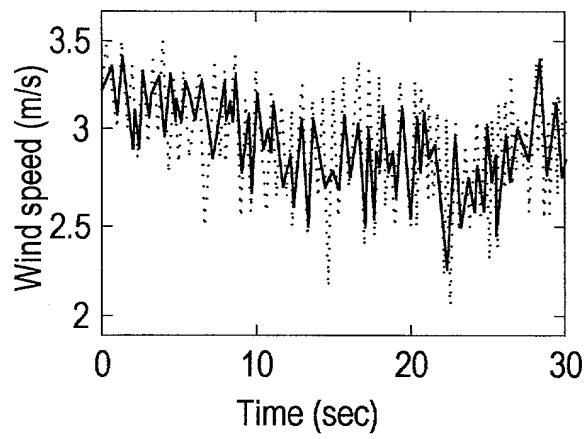


FIG. 5(f)

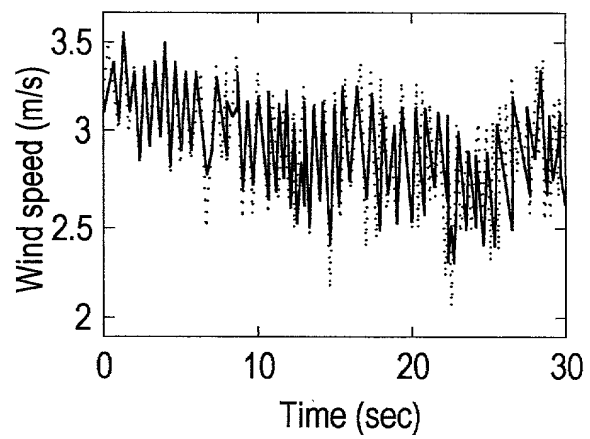


FIG. 5(g)

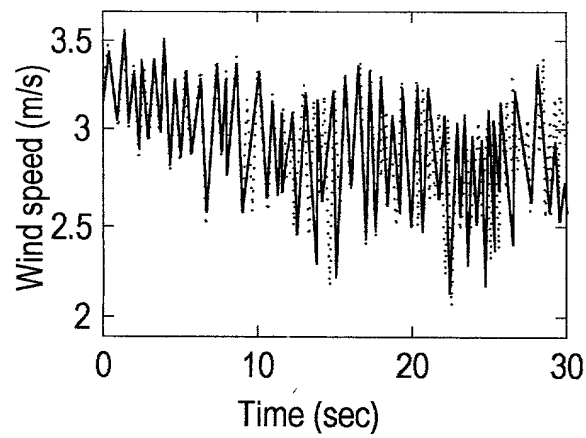


FIG. 5(h)

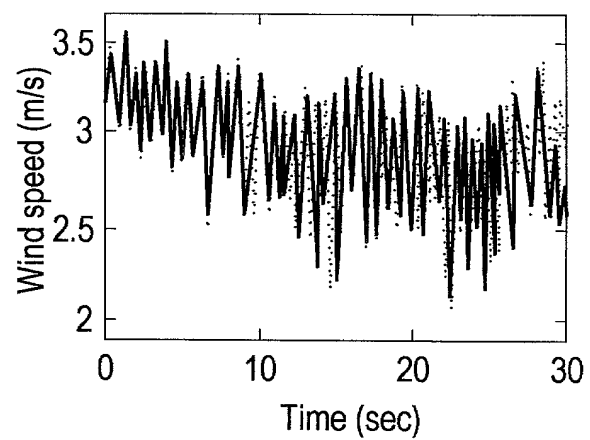


FIG. 5(i)

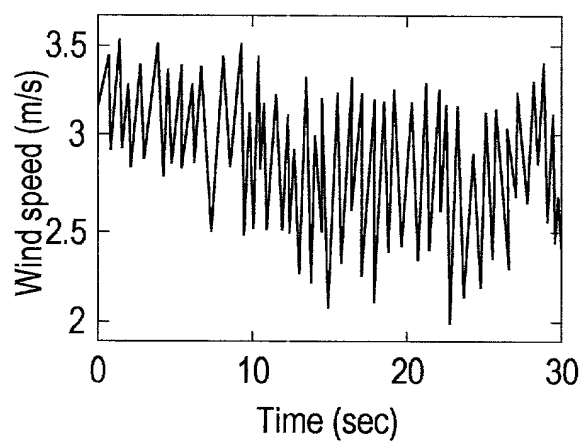


FIG. 5(j)

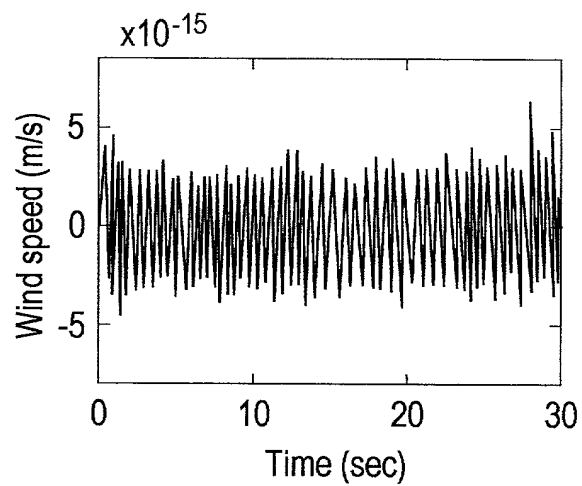


FIG. 6(a)

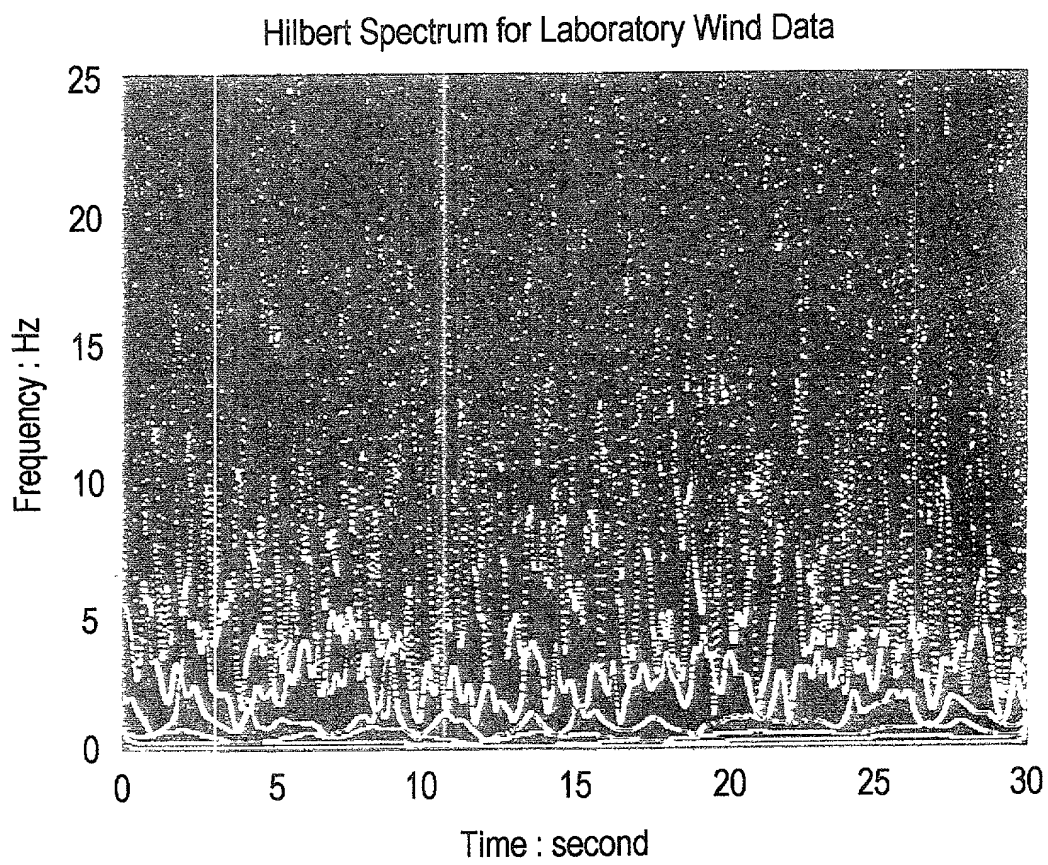


FIG. 6(b)

Wavelet Spectrum for Laboratory Wind Data

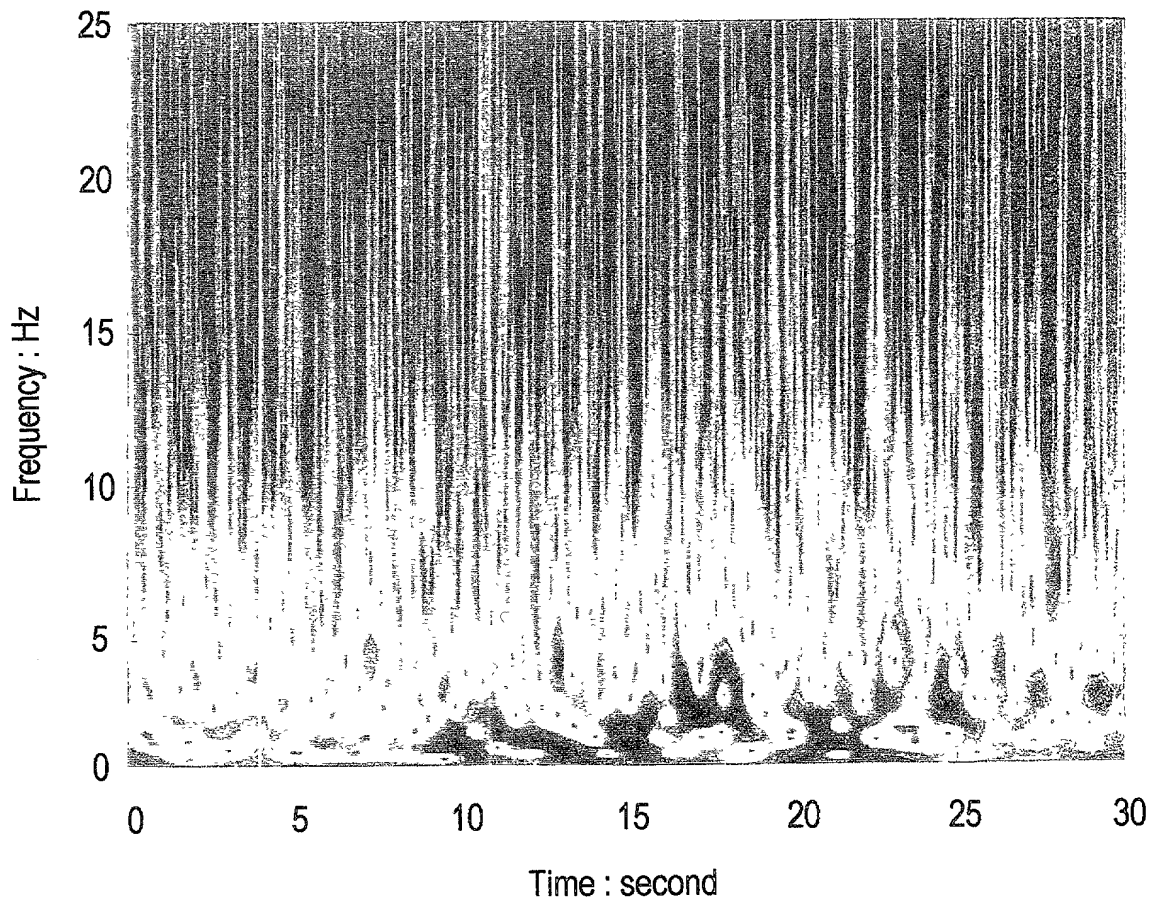


FIG. 6(c)

Hilbert Spectrum for Laboratory Wind Data : 15x15 Smoothed

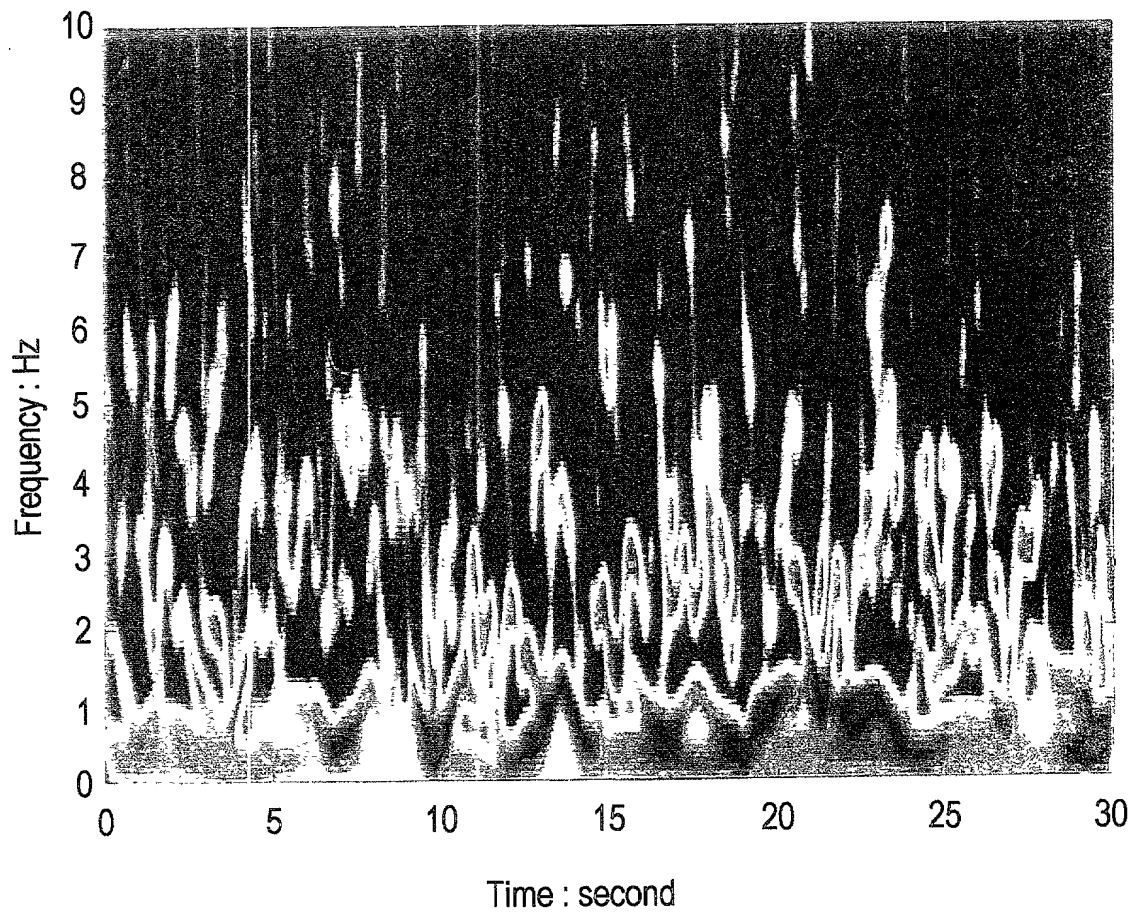


FIG. 7

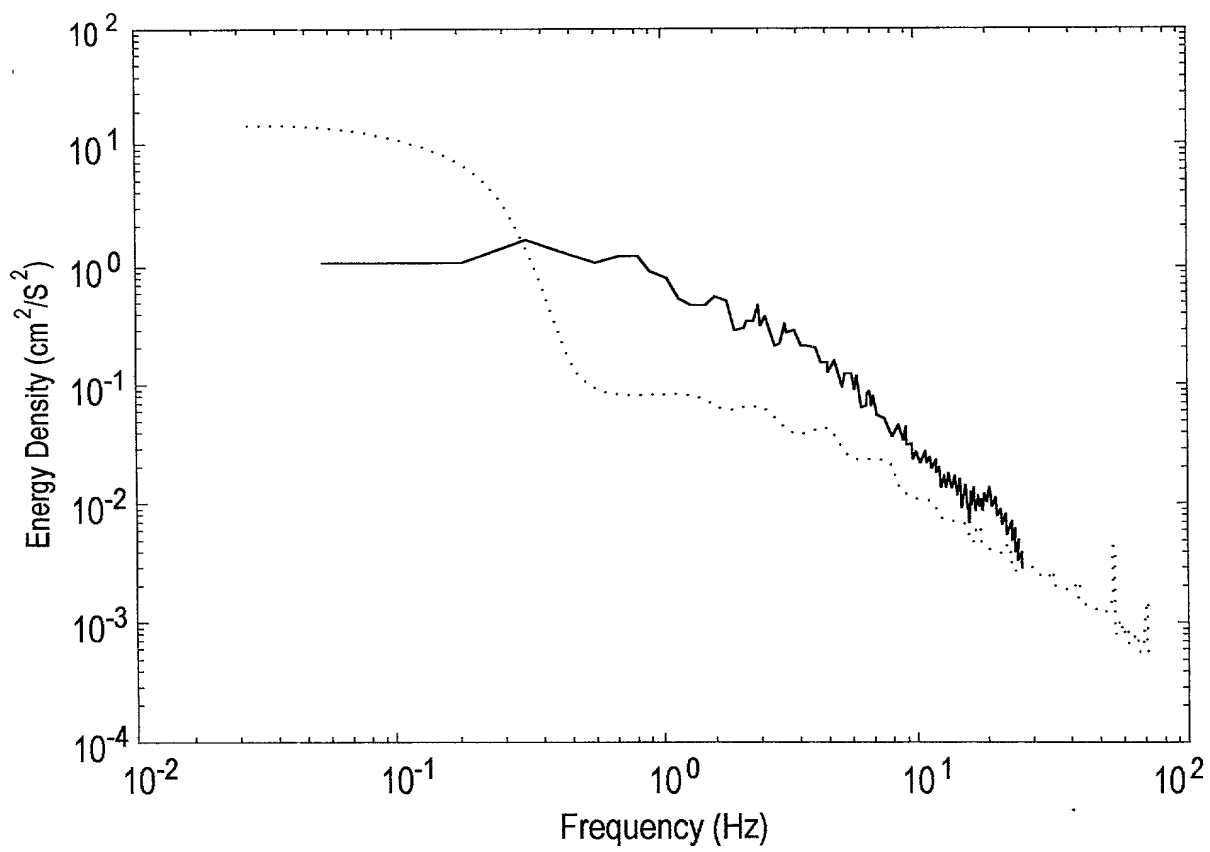


FIG. 8(a)

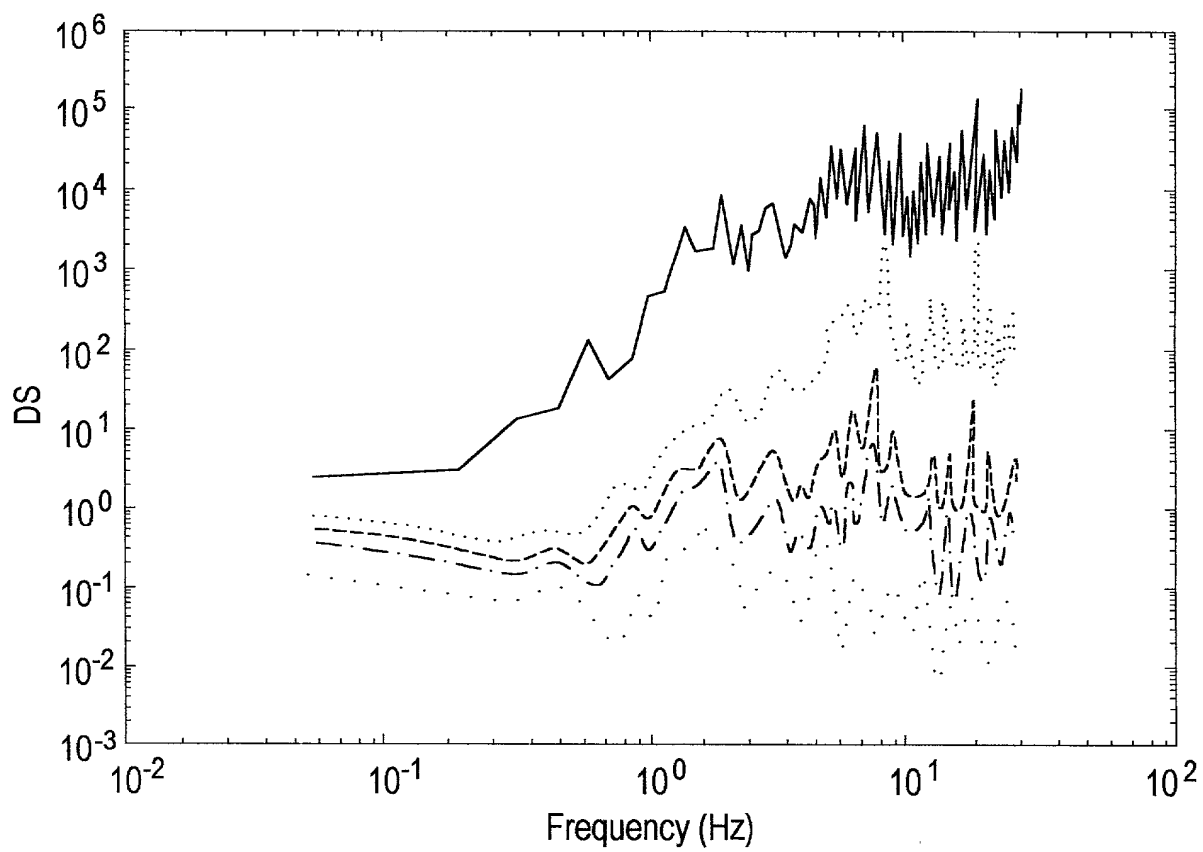


FIG. 8(b)

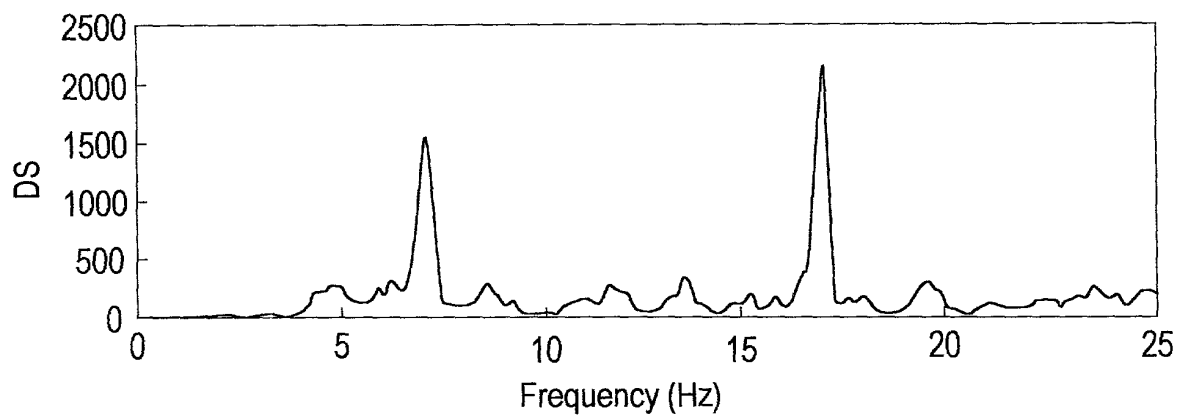
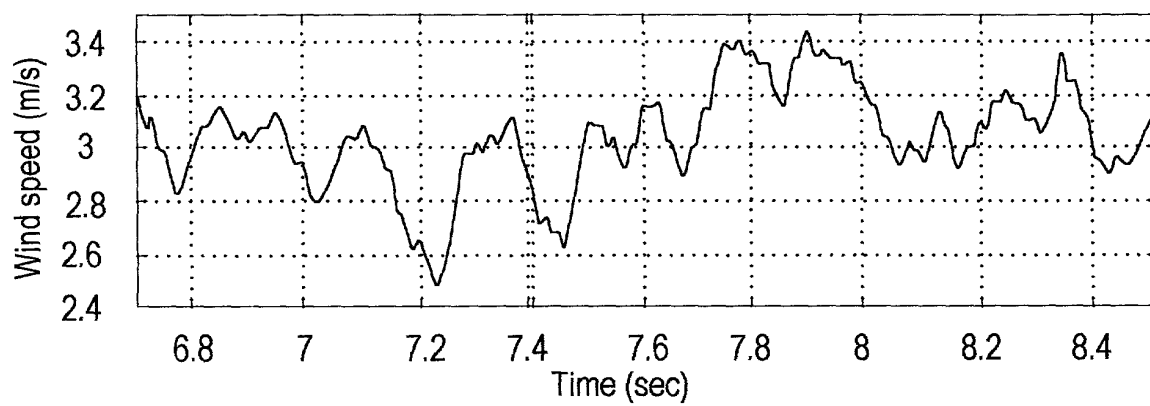


FIG. 8(c)



PULMONARY ARTERIAL PRESSURE OF RAT (24 HR.)

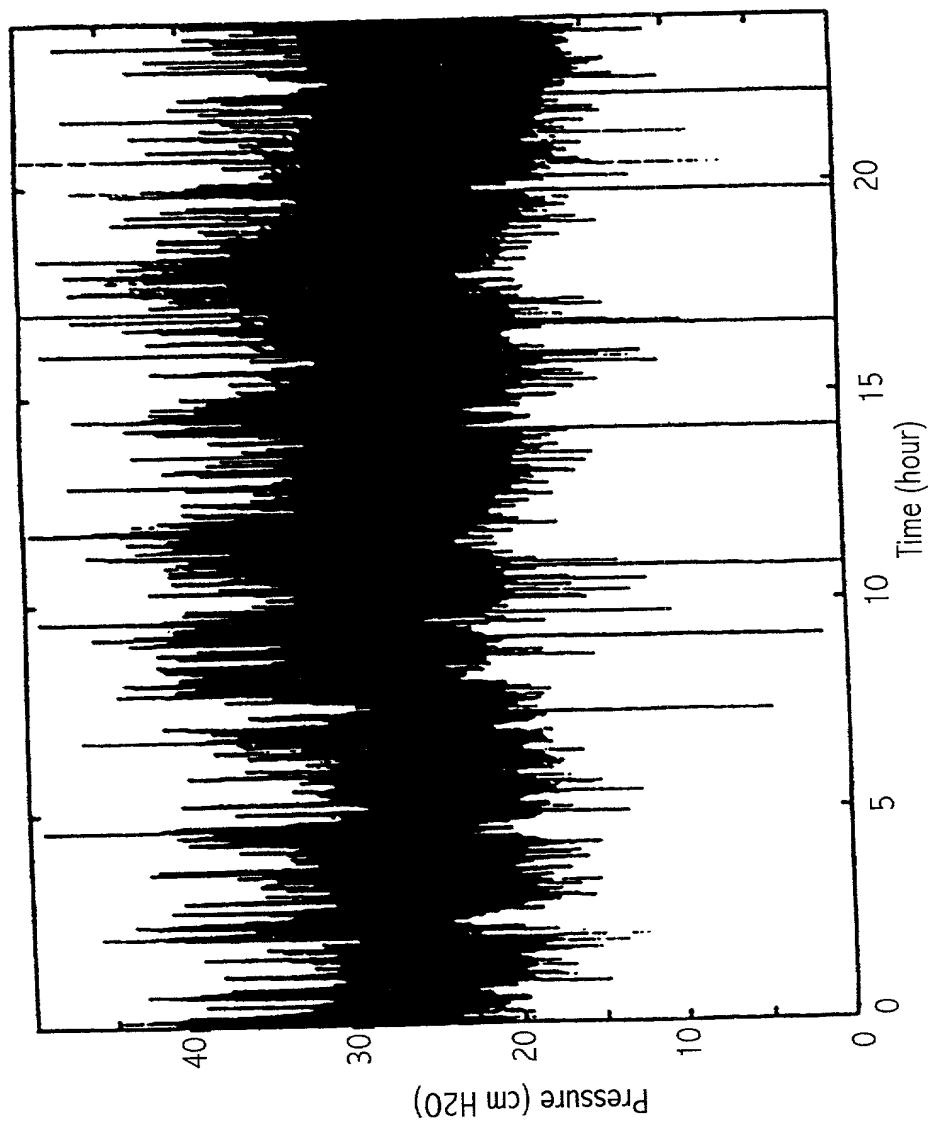


FIG. 9(a)

└



FIG. 9(b)

FIG. 9(c) is a line graph showing Pressure (cm H₂O) versus Time (sec). The Y-axis ranges from 30 to 40 cm H₂O, and the X-axis ranges from 300 to 310 seconds. The graph displays a highly oscillatory signal, indicating rapid fluctuations in pressure over time.

FIG. 9(c)

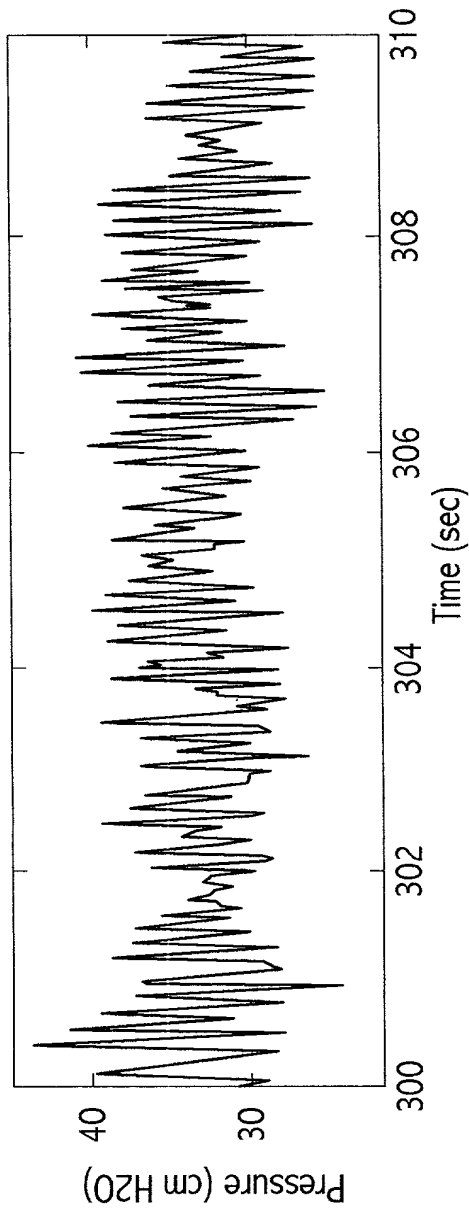


FIG. 9(d)

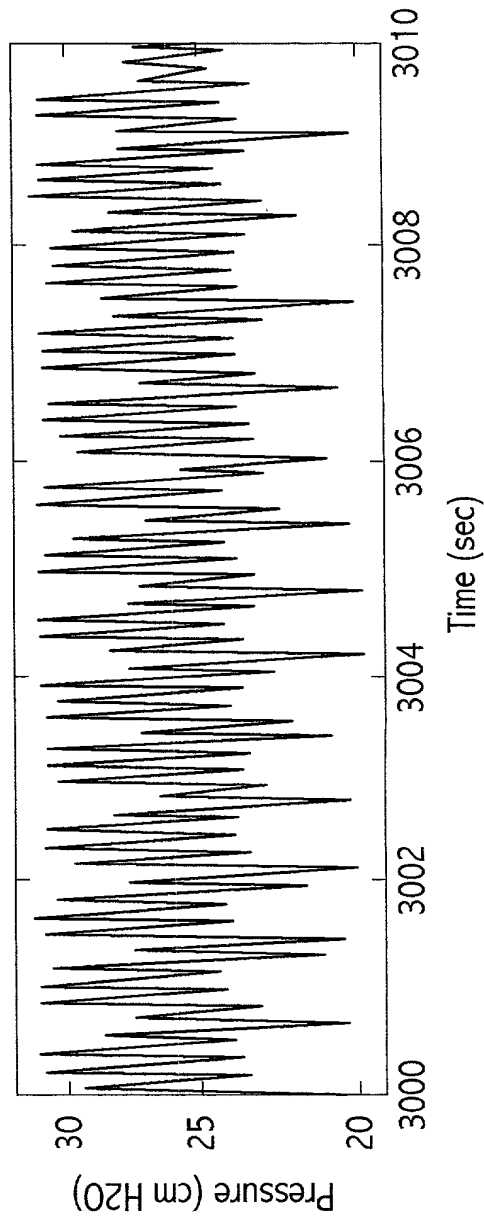


FIG. 9(e)

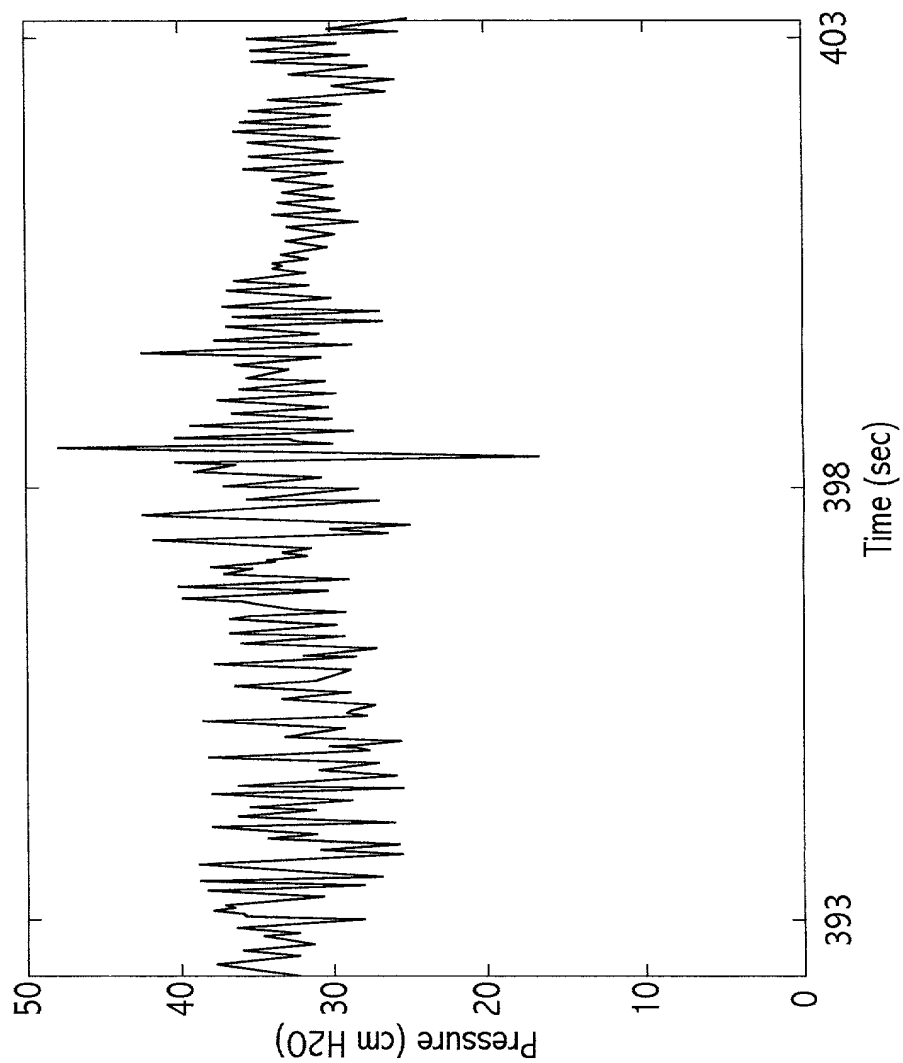


FIG. 9(g)

DIASTOLIC PRESSURES IN 1 HR.

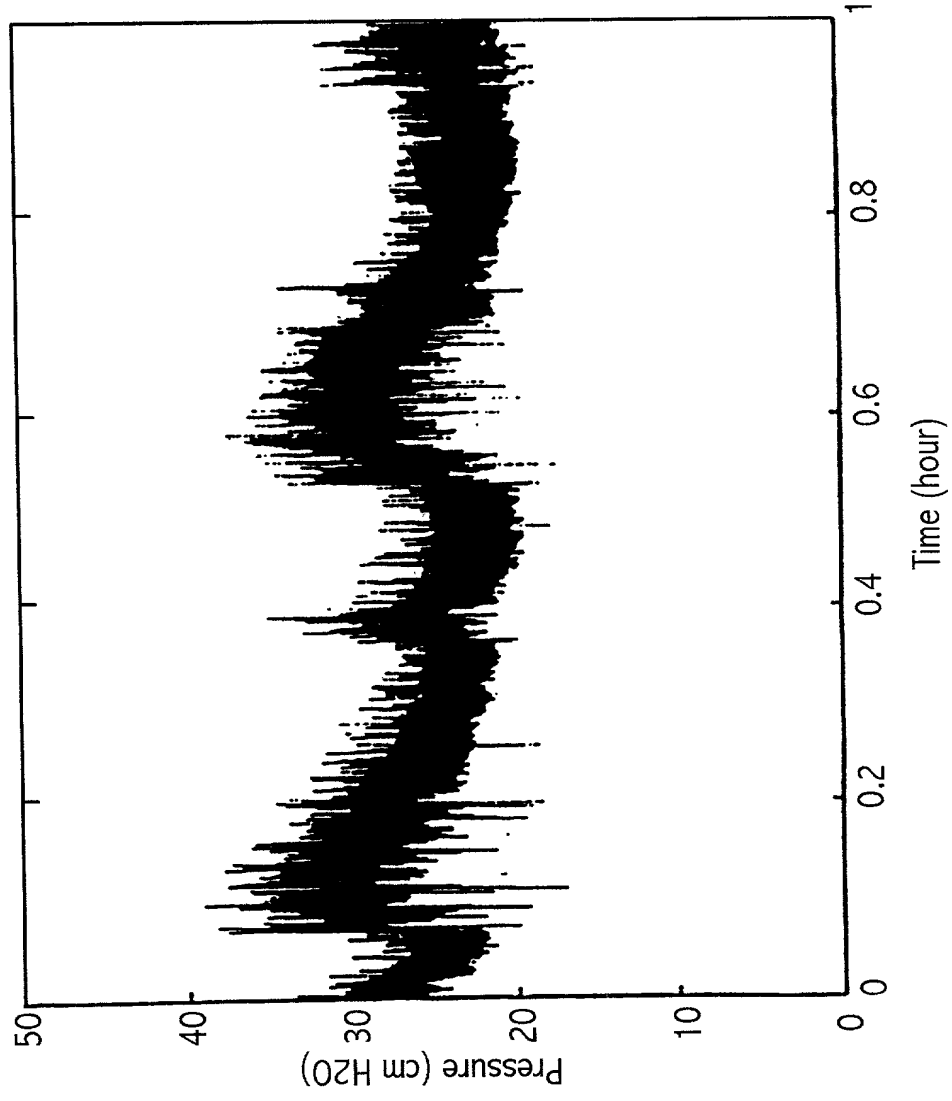
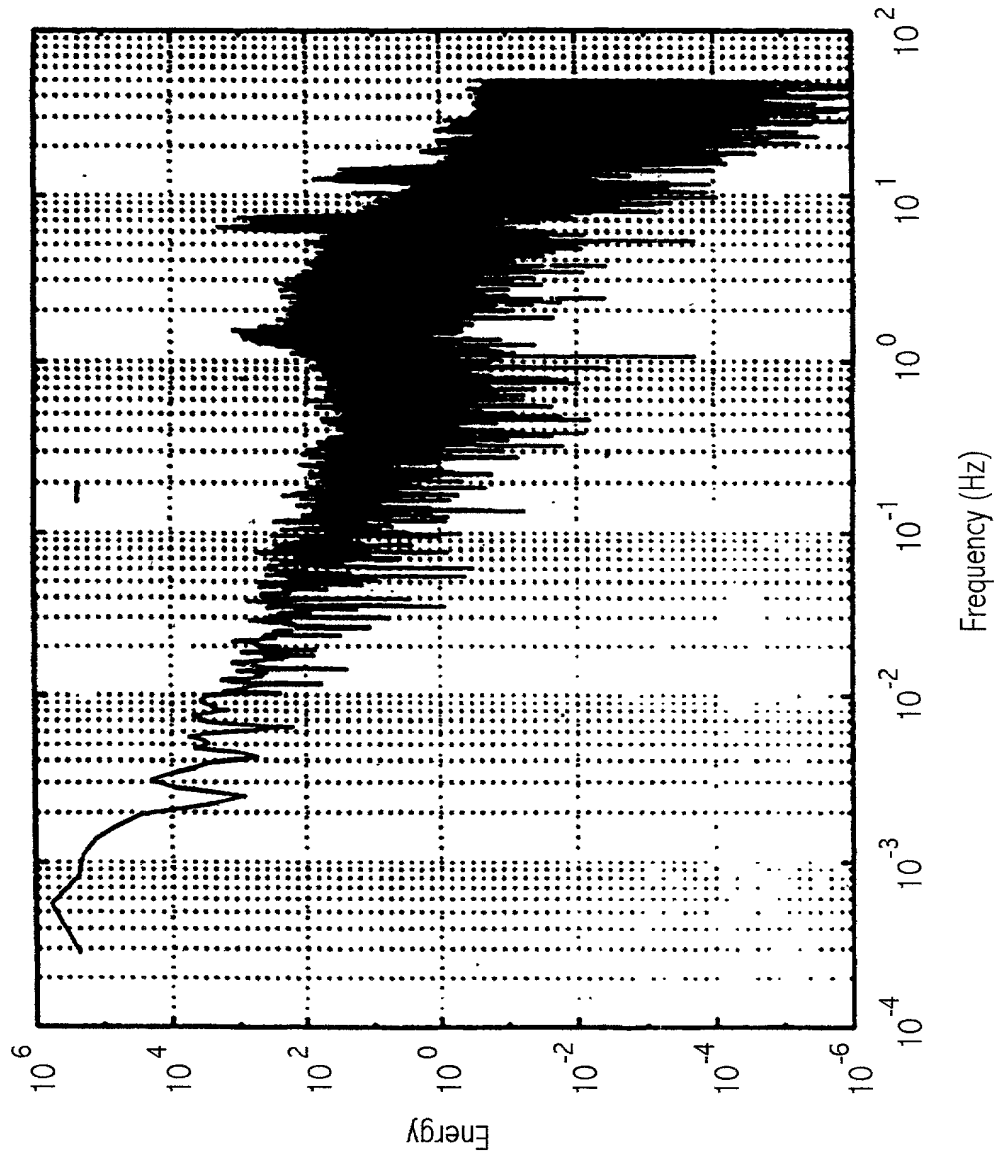


FIG. 10(a)

FOURIER SPECTRUM OF THE FIRST HR. DATA



FOURIER SPECTRUM OF TWO 10-SEC STRIPS

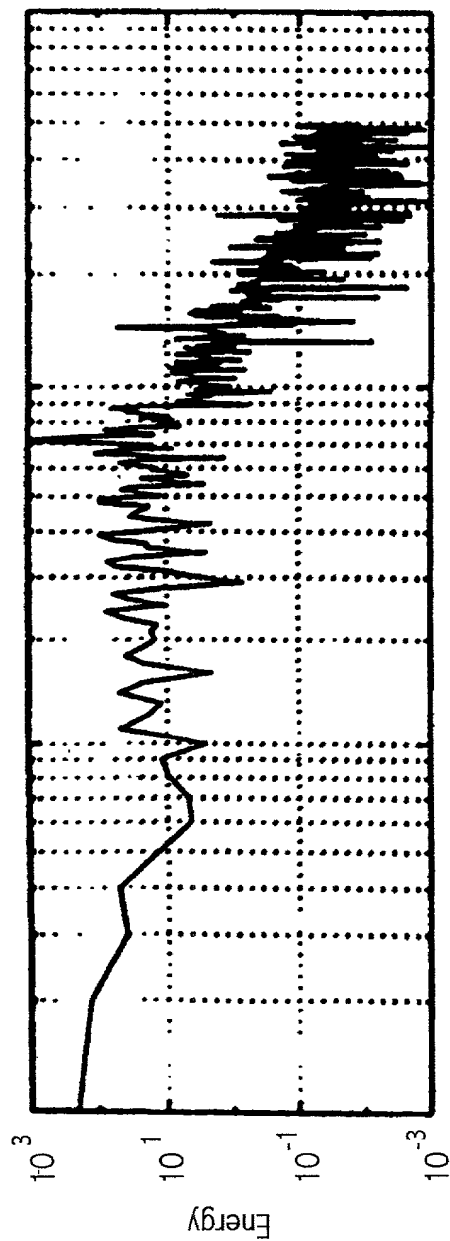
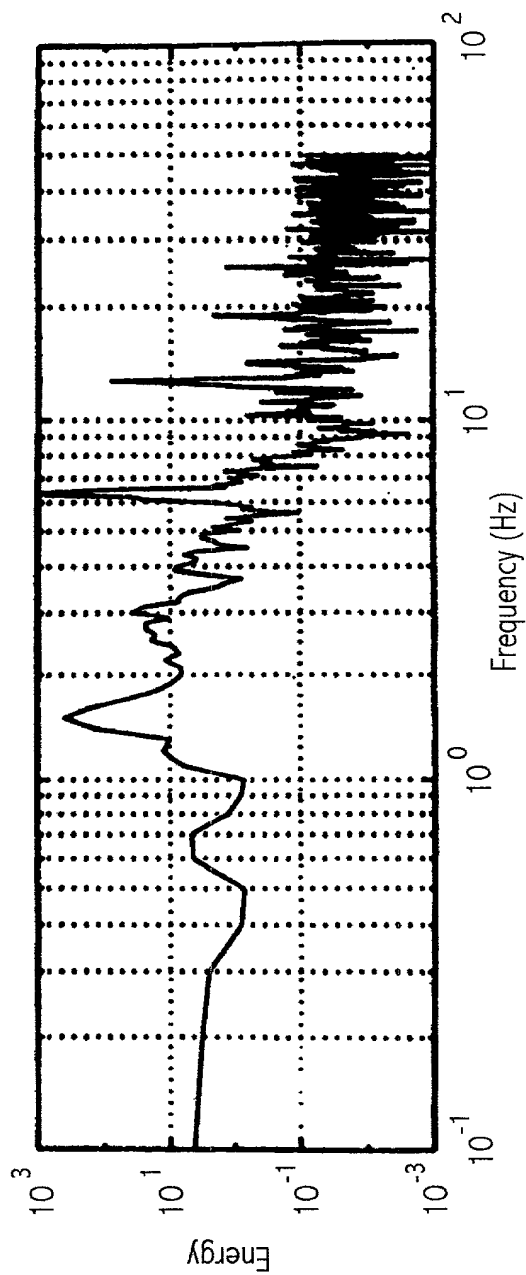


FIG. 10(c)



1999



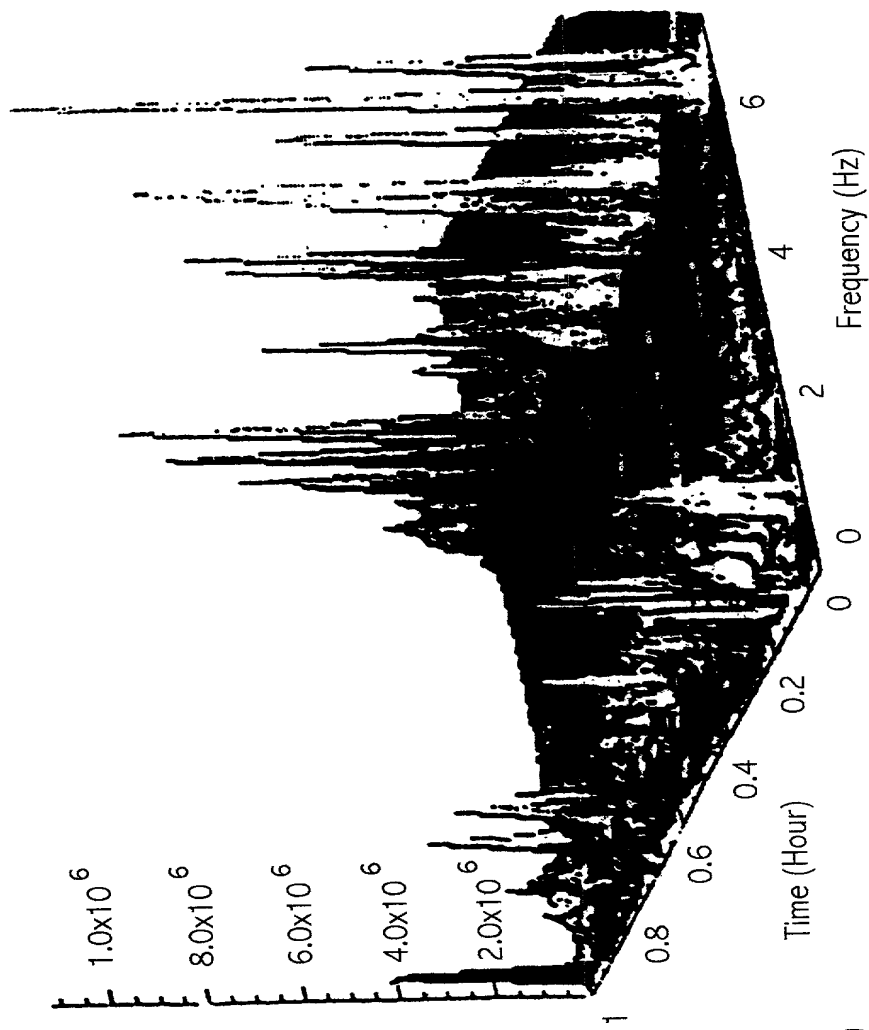


FIG. 10(e)

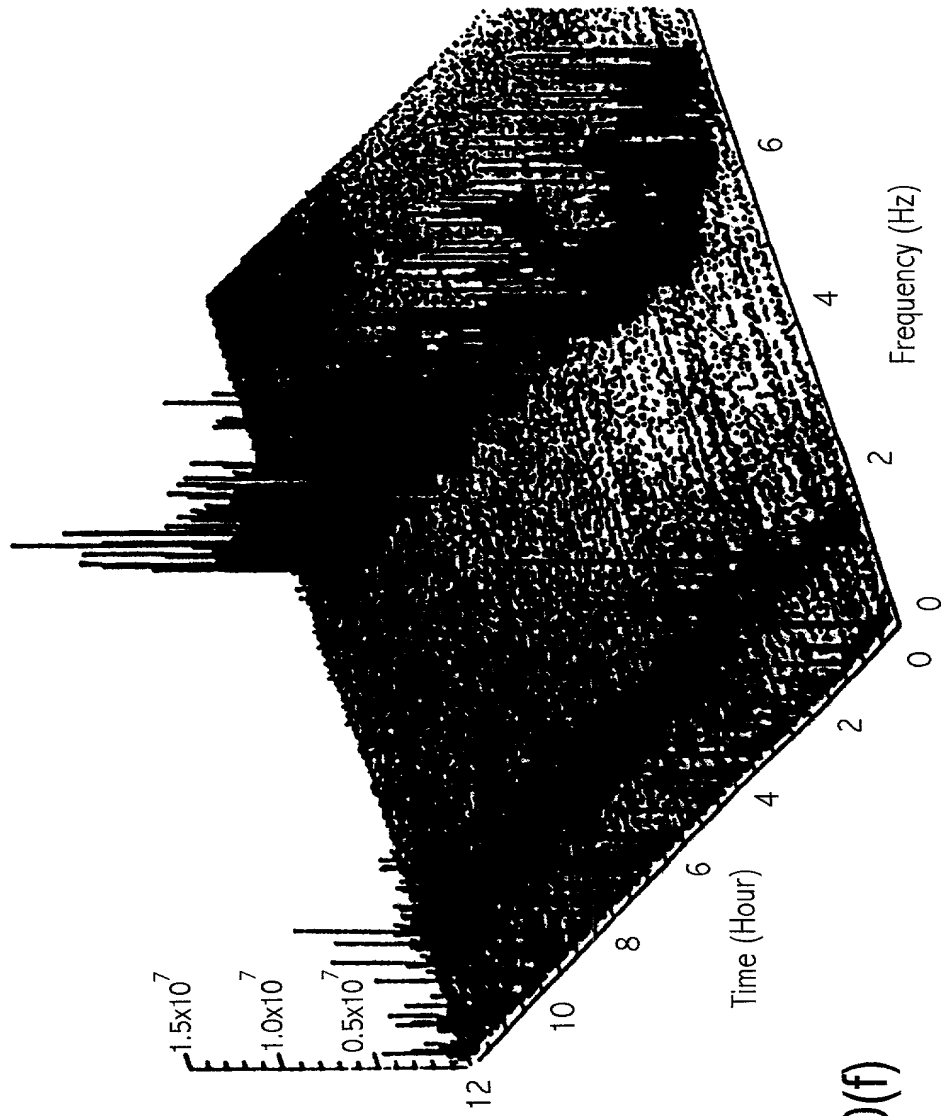


FIG. 10(f)

FOURIER AND MARGINAL HILBERT SPECTRA, FIRST 10-SEC.

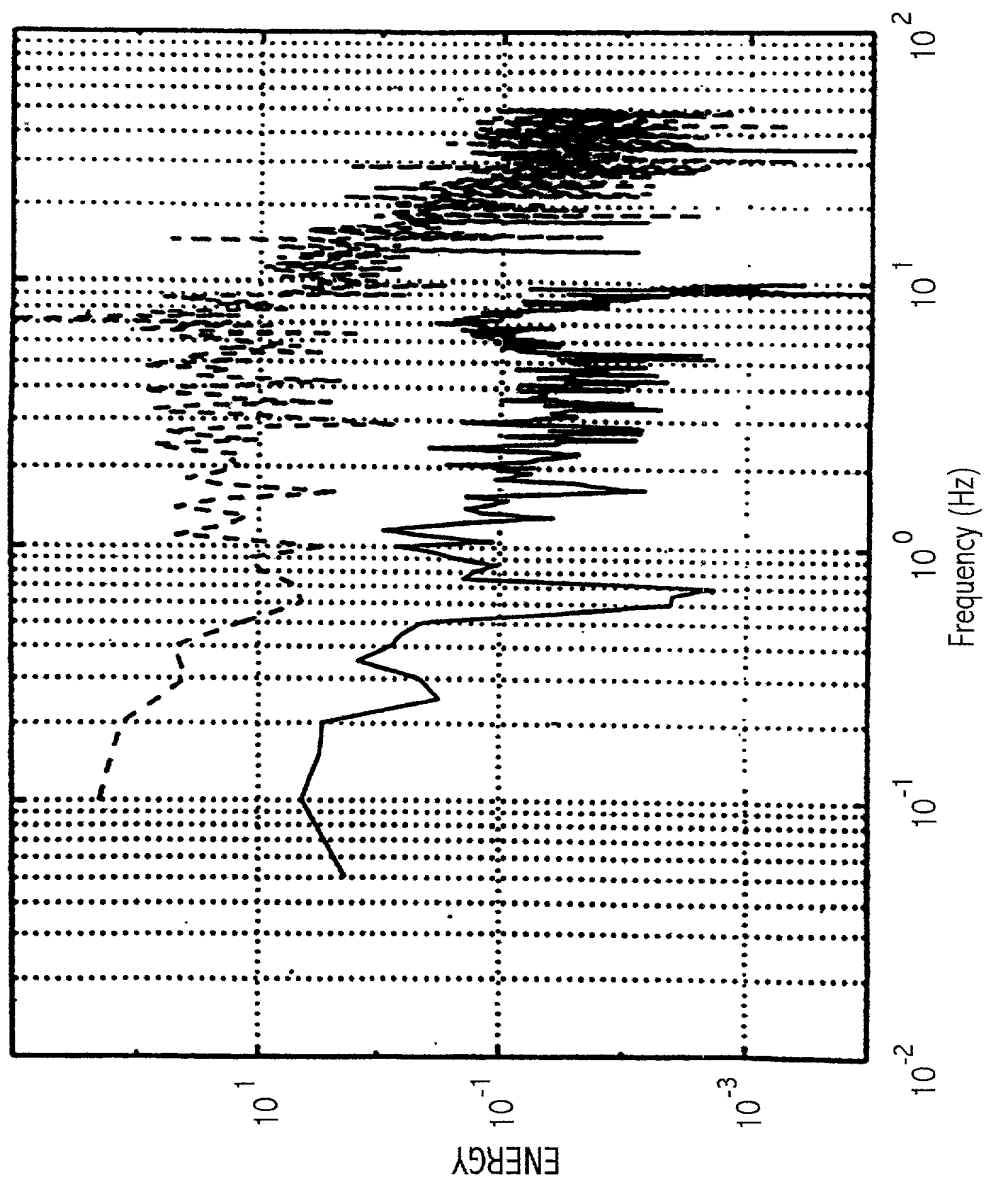
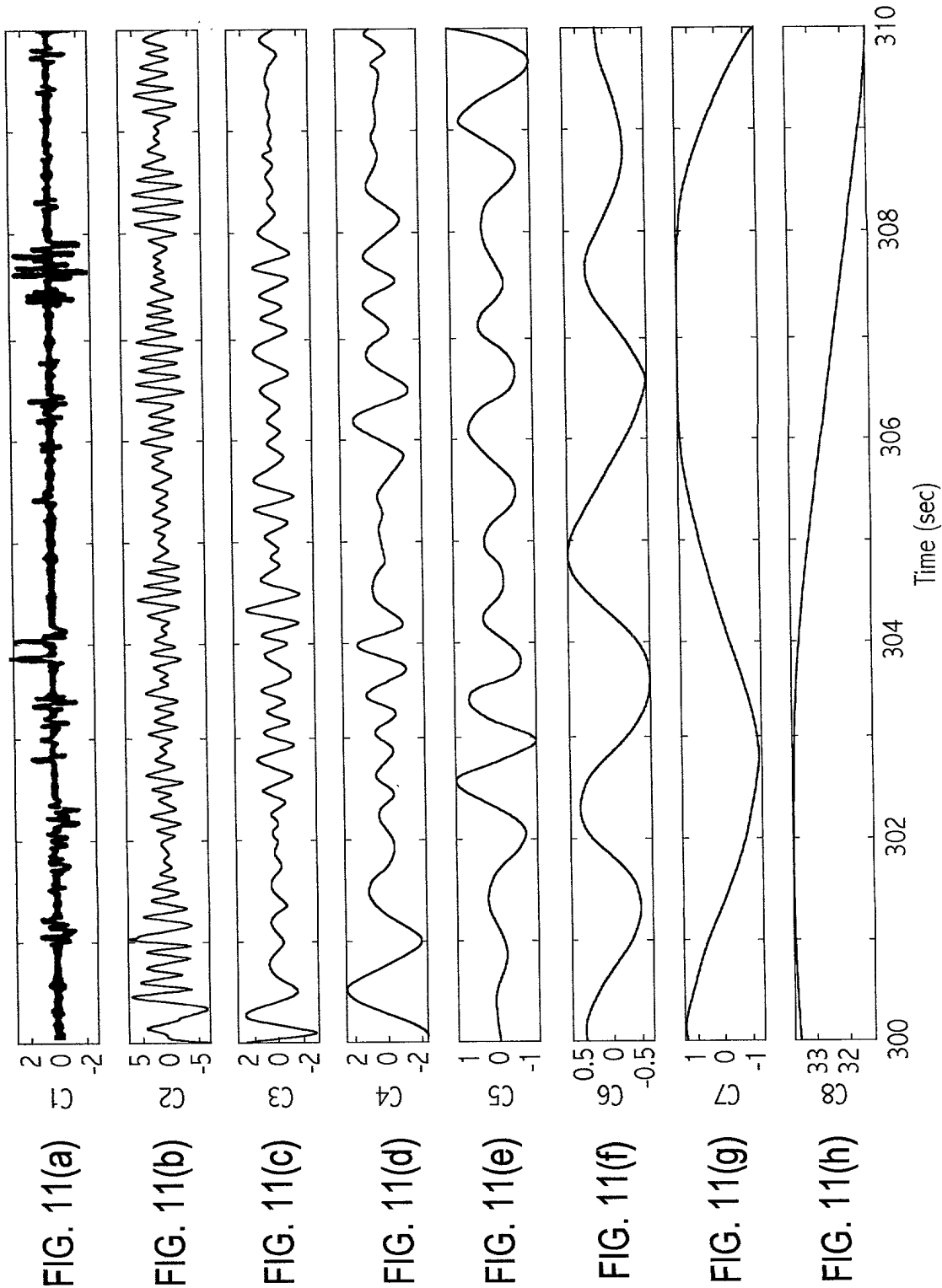
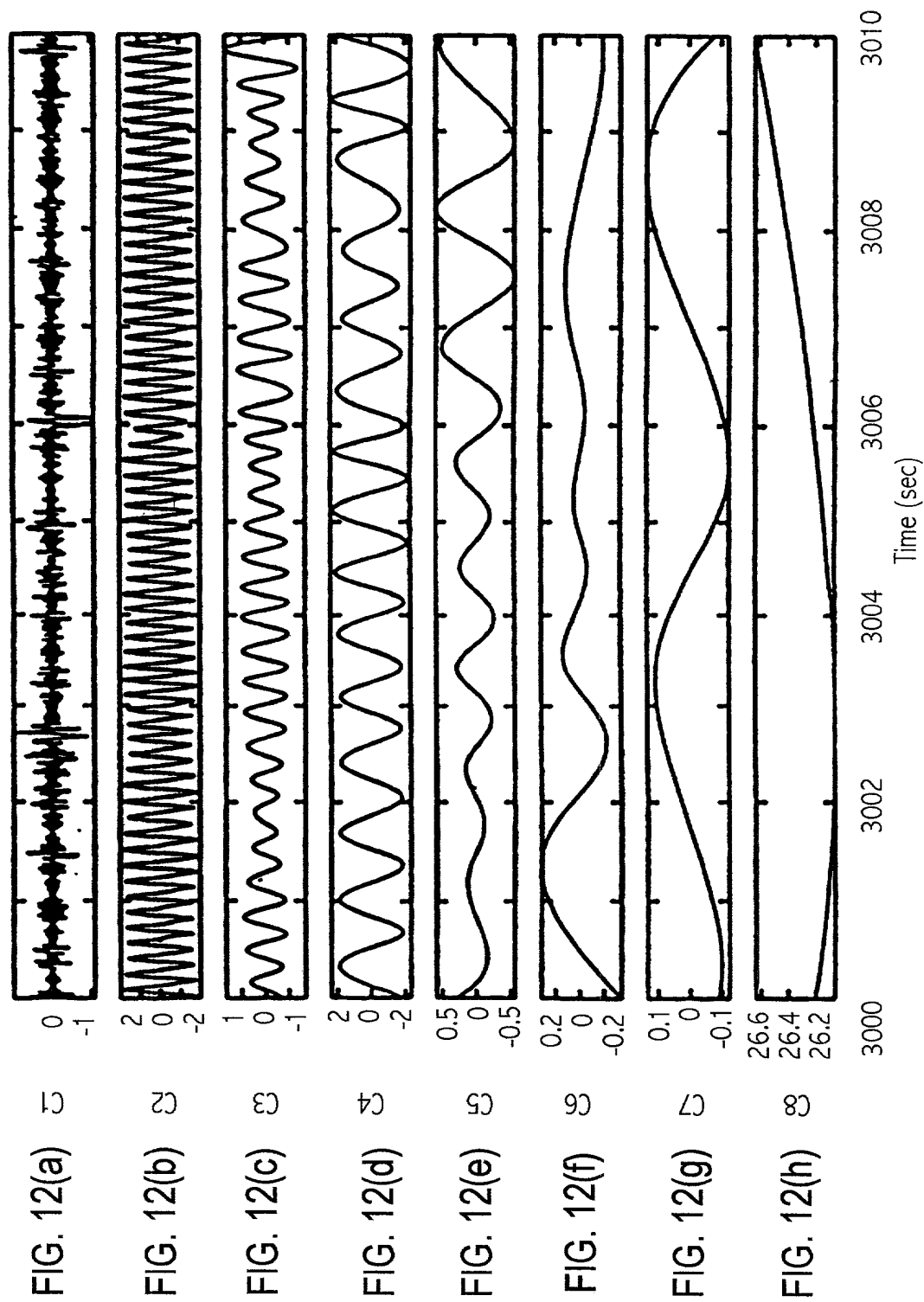


FIG. 10(g)

IMF-COMPONENTS OF THE FIRST 10-SEC. STRIP



IMF-COMPONENTS OF THE SECOND 10-SEC. STRIP



UPPER PANEL: C1+C2+C3; LOWER PANEL: C2+C3+C4

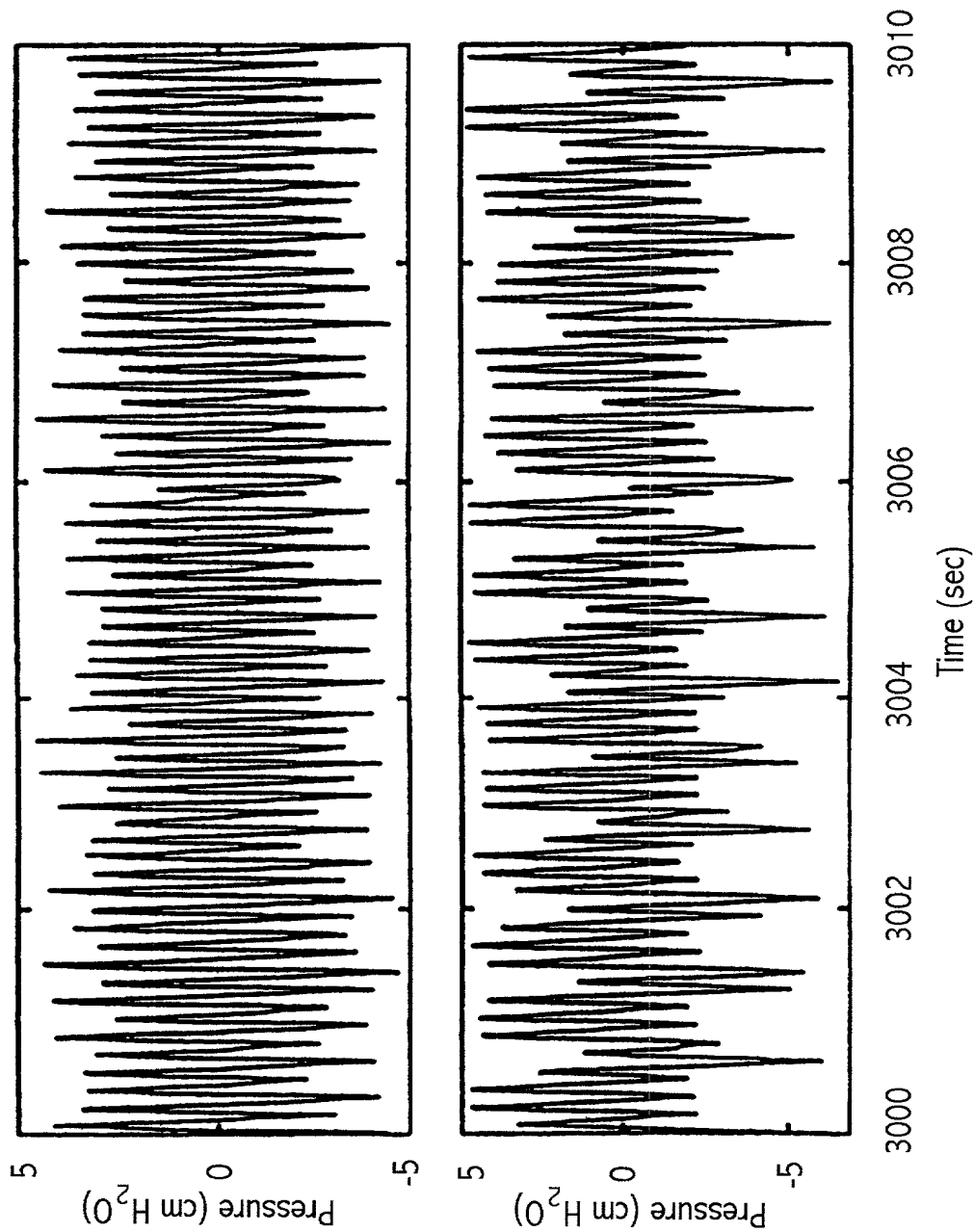
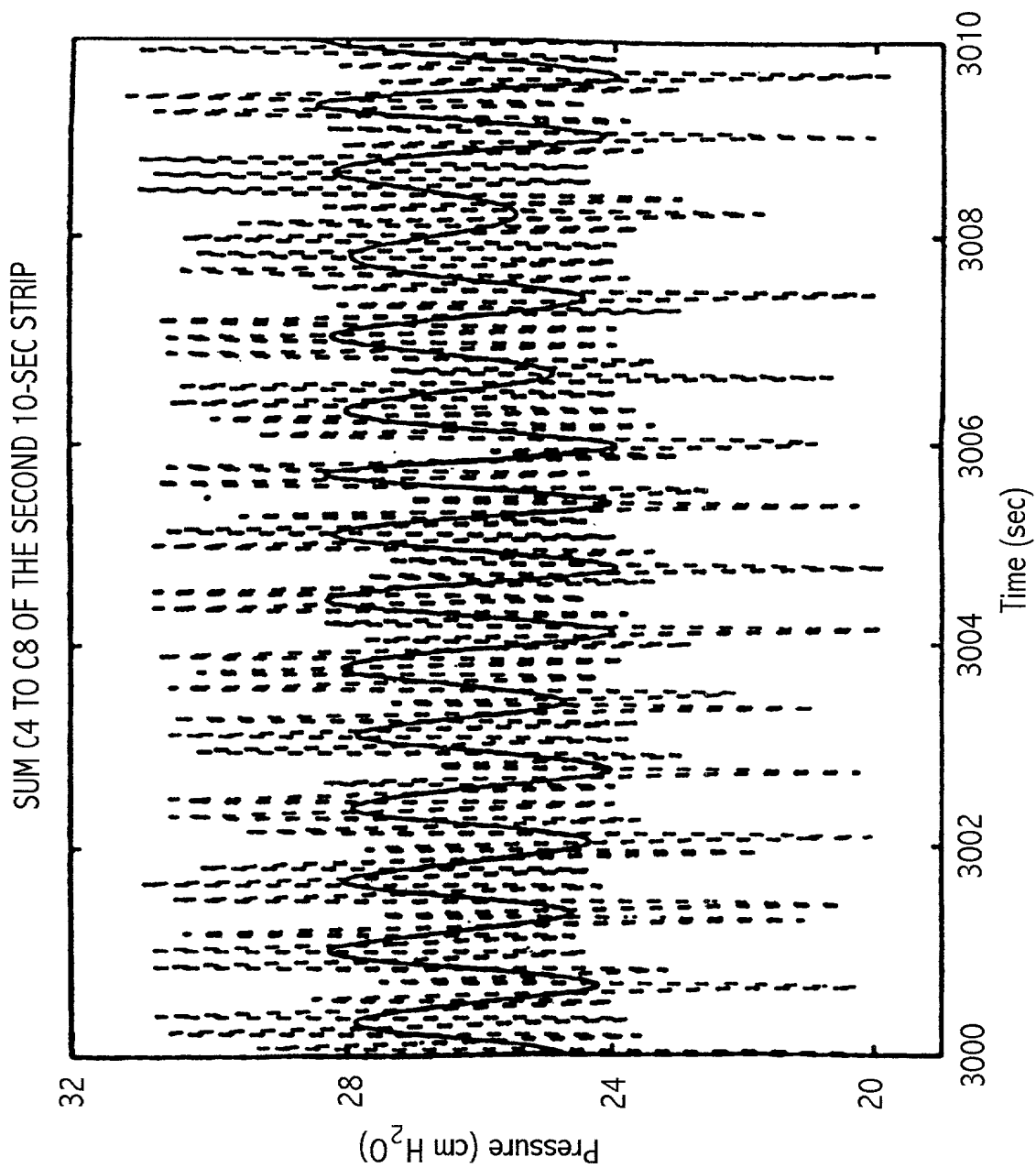


FIG. 13(c)



HHT-SPECTRUM OF THE SECOND 10-SEC STRIP

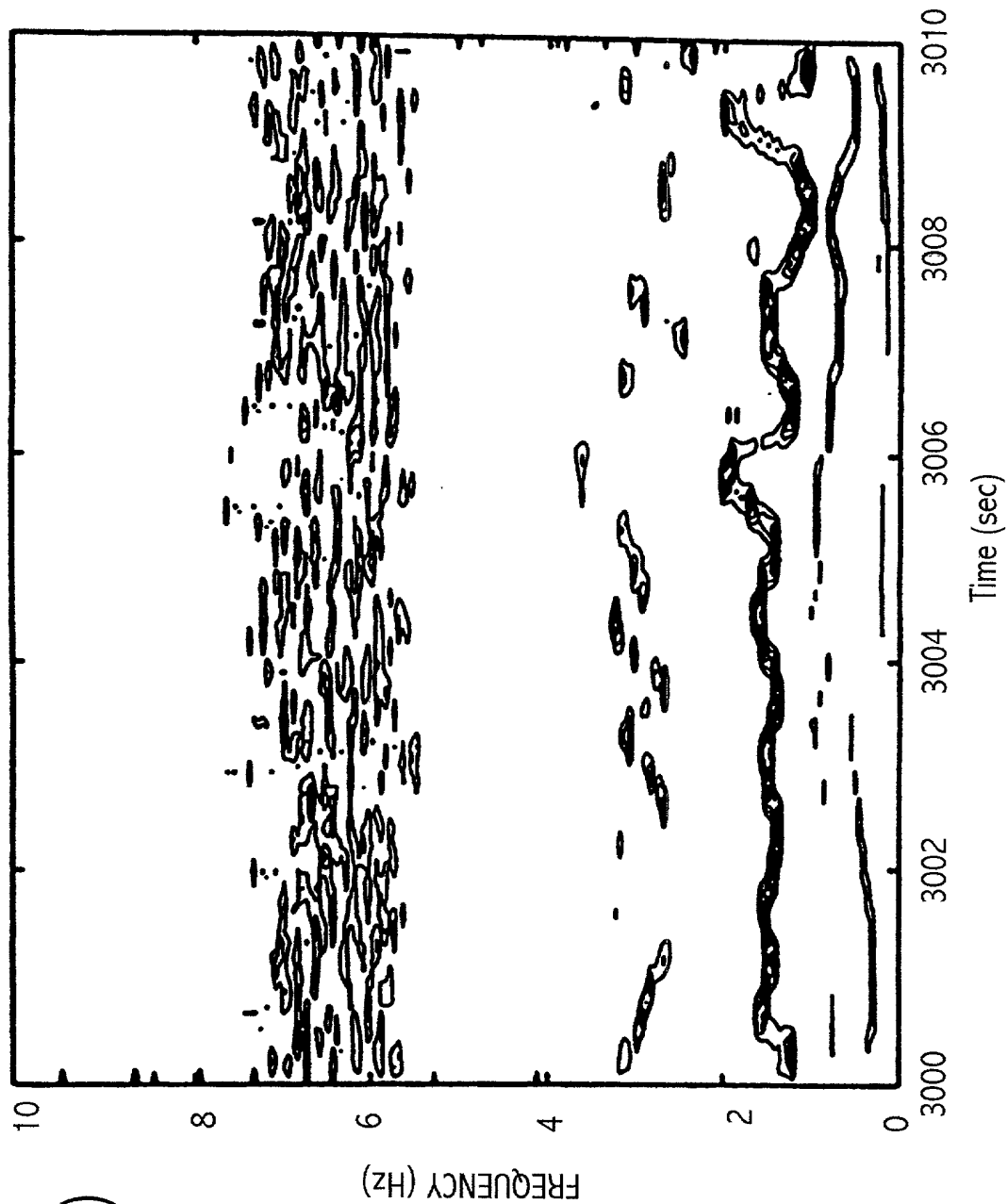
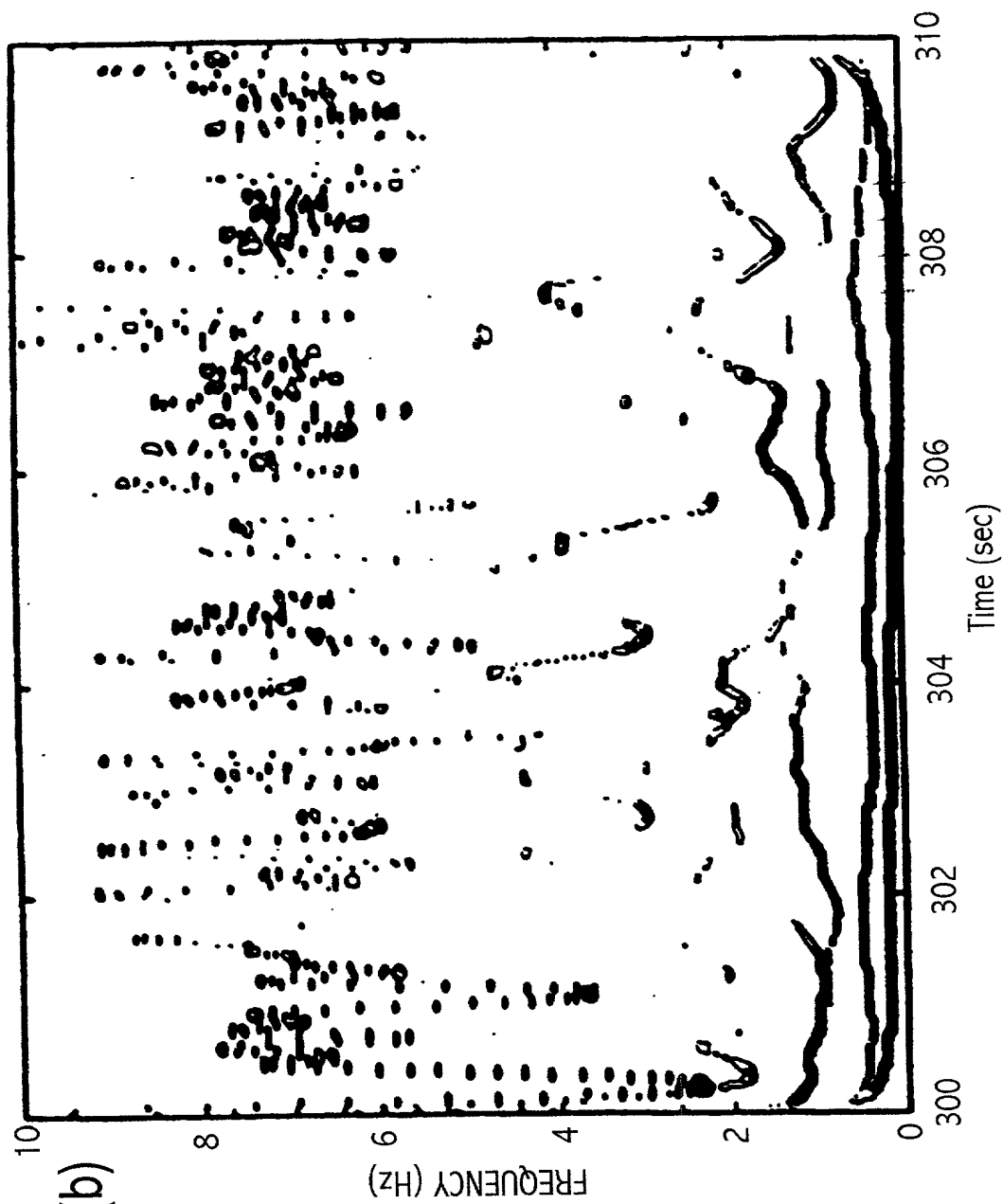


FIG. 14(a)

code	country	year	region	type	value	unit
001	USA	1990	North	1990	1000000	kg
002	USA	1991	North	1991	1000000	kg
003	USA	1992	North	1992	1000000	kg
004	USA	1993	North	1993	1000000	kg
005	USA	1994	North	1994	1000000	kg
006	USA	1995	North	1995	1000000	kg
007	USA	1996	North	1996	1000000	kg
008	USA	1997	North	1997	1000000	kg
009	USA	1998	North	1998	1000000	kg
010	USA	1999	North	1999	1000000	kg
011	USA	2000	North	2000	1000000	kg
012	USA	2001	North	2001	1000000	kg
013	USA	2002	North	2002	1000000	kg
014	USA	2003	North	2003	1000000	kg
015	USA	2004	North	2004	1000000	kg
016	USA	2005	North	2005	1000000	kg
017	USA	2006	North	2006	1000000	kg
018	USA	2007	North	2007	1000000	kg
019	USA	2008	North	2008	1000000	kg
020	USA	2009	North	2009	1000000	kg
021	USA	2010	North	2010	1000000	kg
022	USA	2011	North	2011	1000000	kg
023	USA	2012	North	2012	1000000	kg
024	USA	2013	North	2013	1000000	kg
025	USA	2014	North	2014	1000000	kg
026	USA	2015	North	2015	1000000	kg
027	USA	2016	North	2016	1000000	kg
028	USA	2017	North	2017	1000000	kg
029	USA	2018	North	2018	1000000	kg
030	USA	2019	North	2019	1000000	kg
031	USA	2020	North	2020	1000000	kg
032	USA	2021	North	2021	1000000	kg
033	USA	2022	North	2022	1000000	kg
034	USA	2023	North	2023	1000000	kg
035	USA	2024	North	2024	1000000	kg
036	USA	2025	North	2025	1000000	kg
037	USA	2026	North	2026	1000000	kg
038	USA	2027	North	2027	1000000	kg
039	USA	2028	North	2028	1000000	kg
040	USA	2029	North	2029	1000000	kg
041	USA	2030	North	2030	1000000	kg
042	USA	2031	North	2031	1000000	kg
043	USA	2032	North	2032	1000000	kg
044	USA	2033	North	2033	1000000	kg
045	USA	2034	North	2034	1000000	kg
046	USA	2035	North	2035	1000000	kg
047	USA	2036	North	2036	1000000	kg
048	USA	2037	North	2037	1000000	kg
049	USA	2038	North	2038	1000000	kg
050	USA	2039	North	2039	1000000	kg
051	USA	2040	North	2040	1000000	kg
052	USA	2041	North	2041	1000000	kg
053	USA	2042	North	2042	1000000	kg
054	USA	2043	North	2043	1000000	kg
055	USA	2044	North	2044	1000000	kg
056	USA	2045	North	2045	1000000	kg
057	USA	2046	North	2046	1000000	kg
058	USA	2047	North			

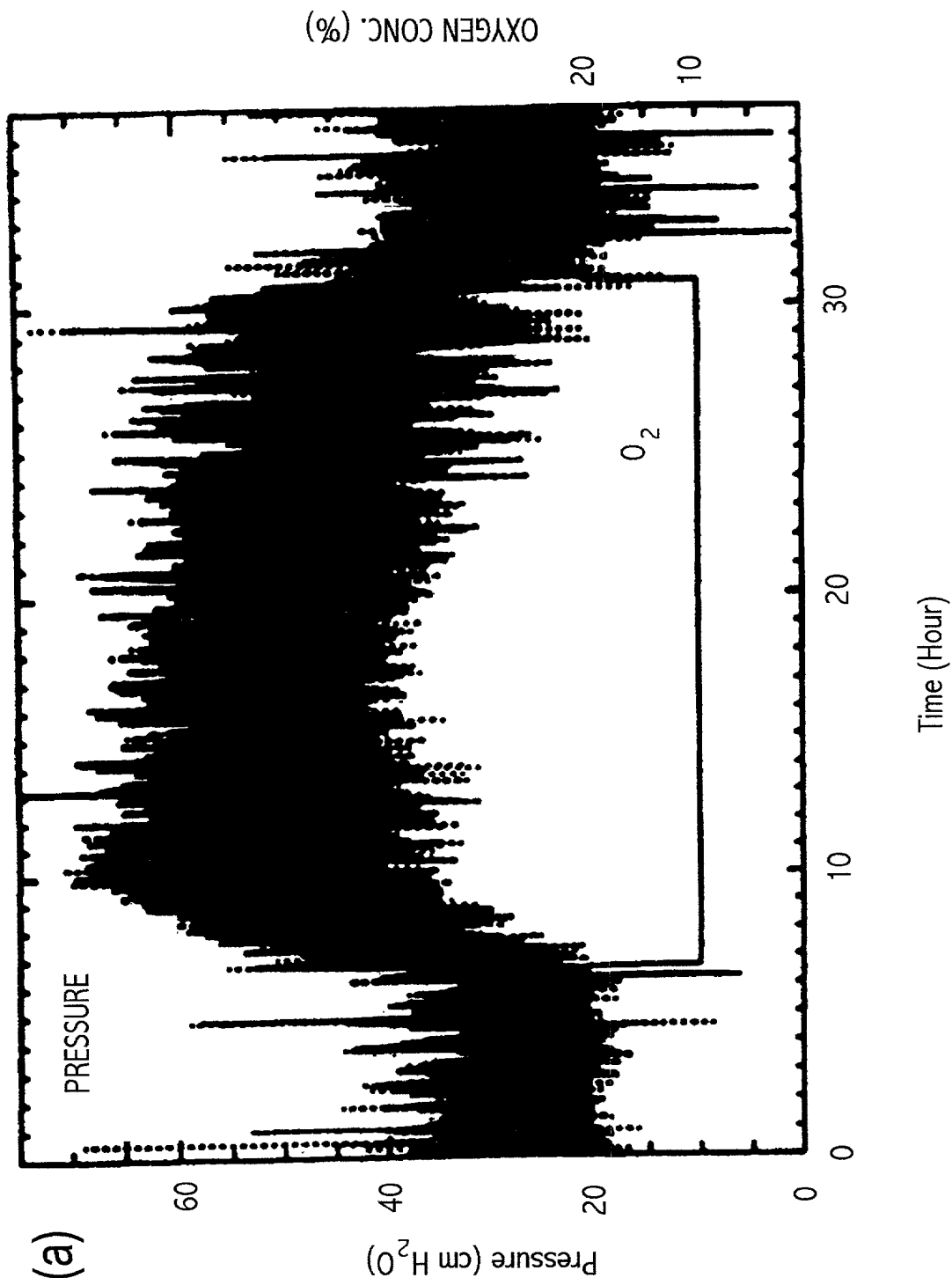
HHT-SPECTRUM OF THE FIRST 10-SEC STRIP



100

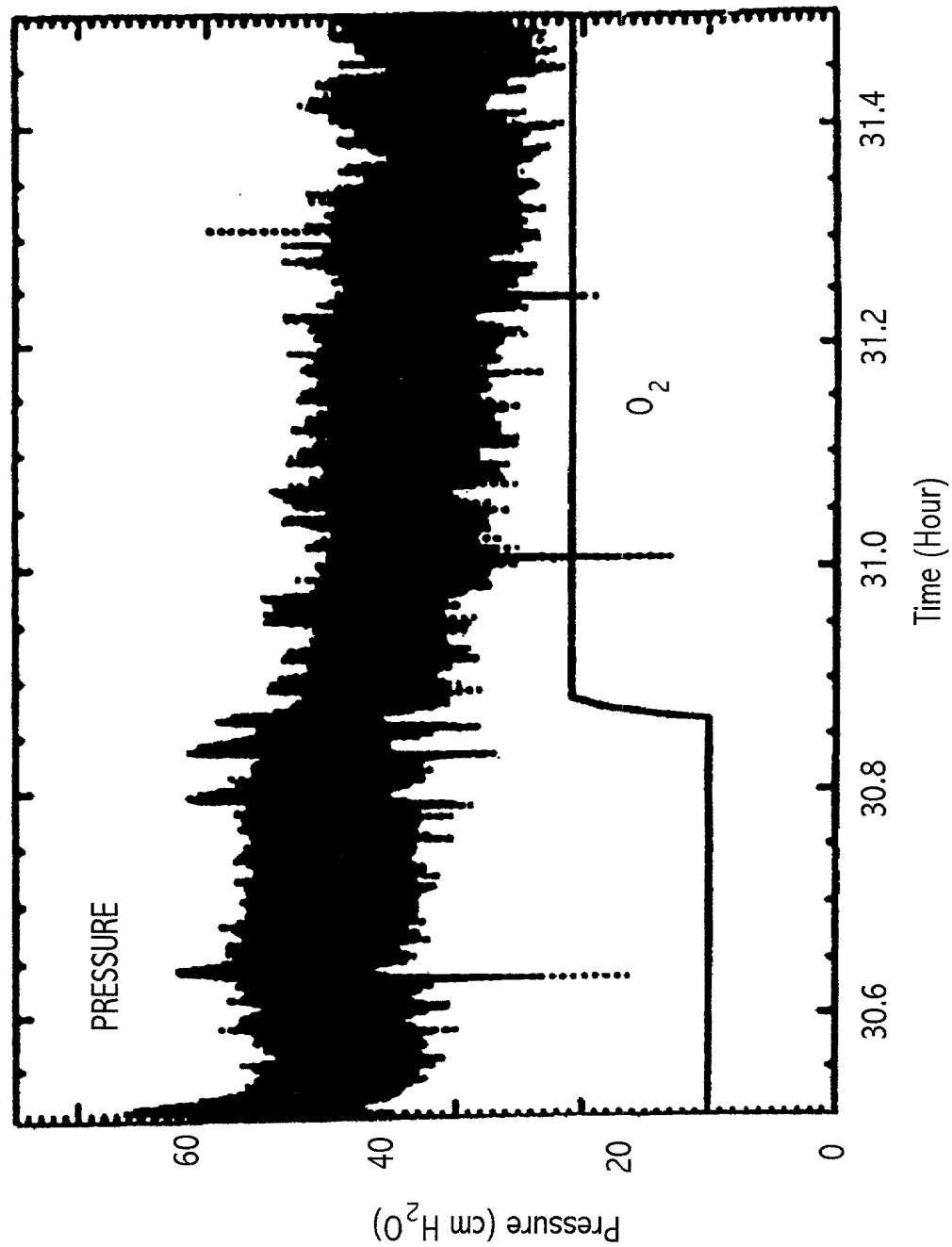
Downloaded from www.ascel.org by [university of california, san diego] on 06/11/15. Copyright ASCE. For personal use only; all rights reserved.

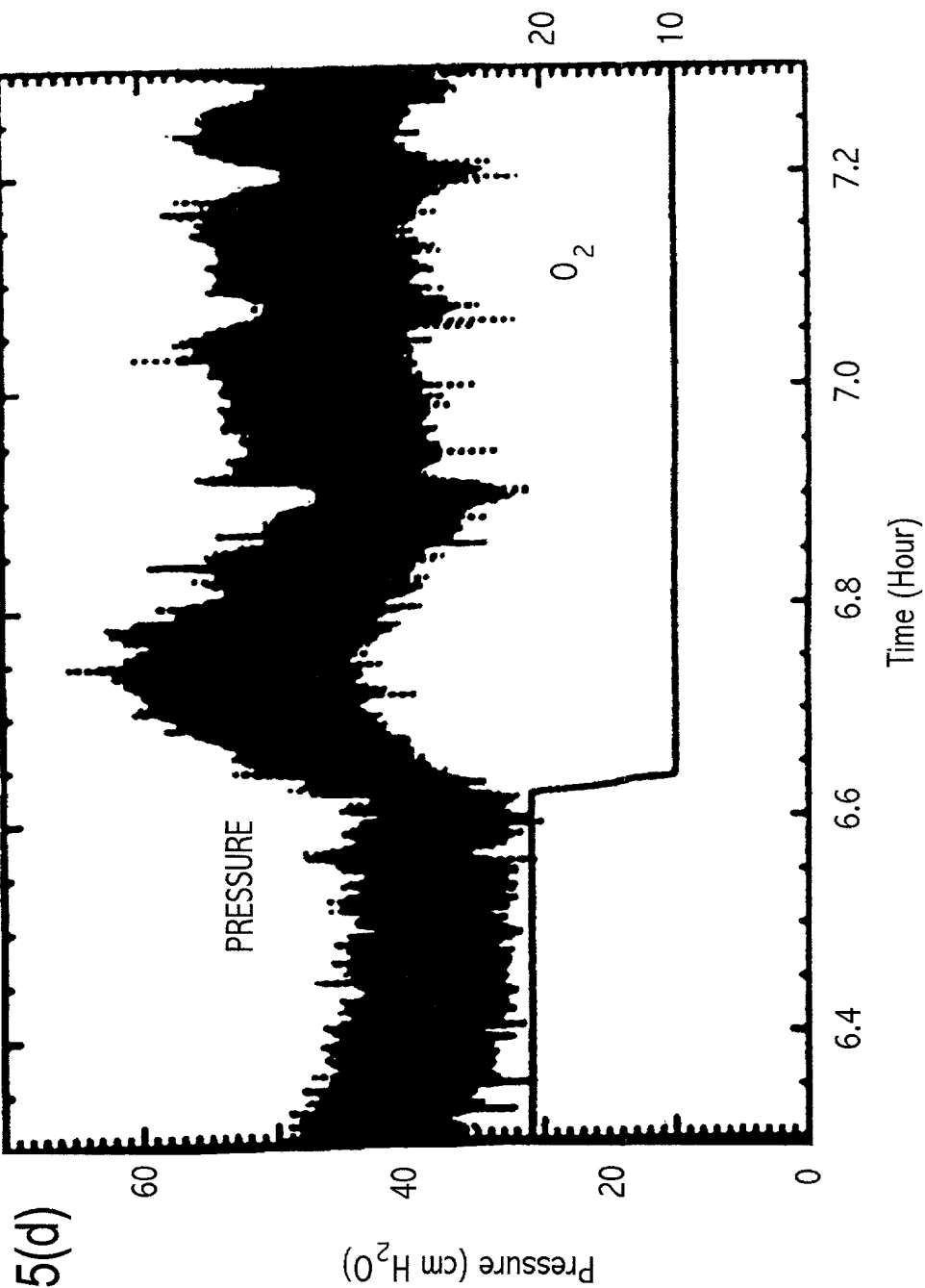
FIG. 15(a)



[illegible]

FIG. 15(c)





Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100

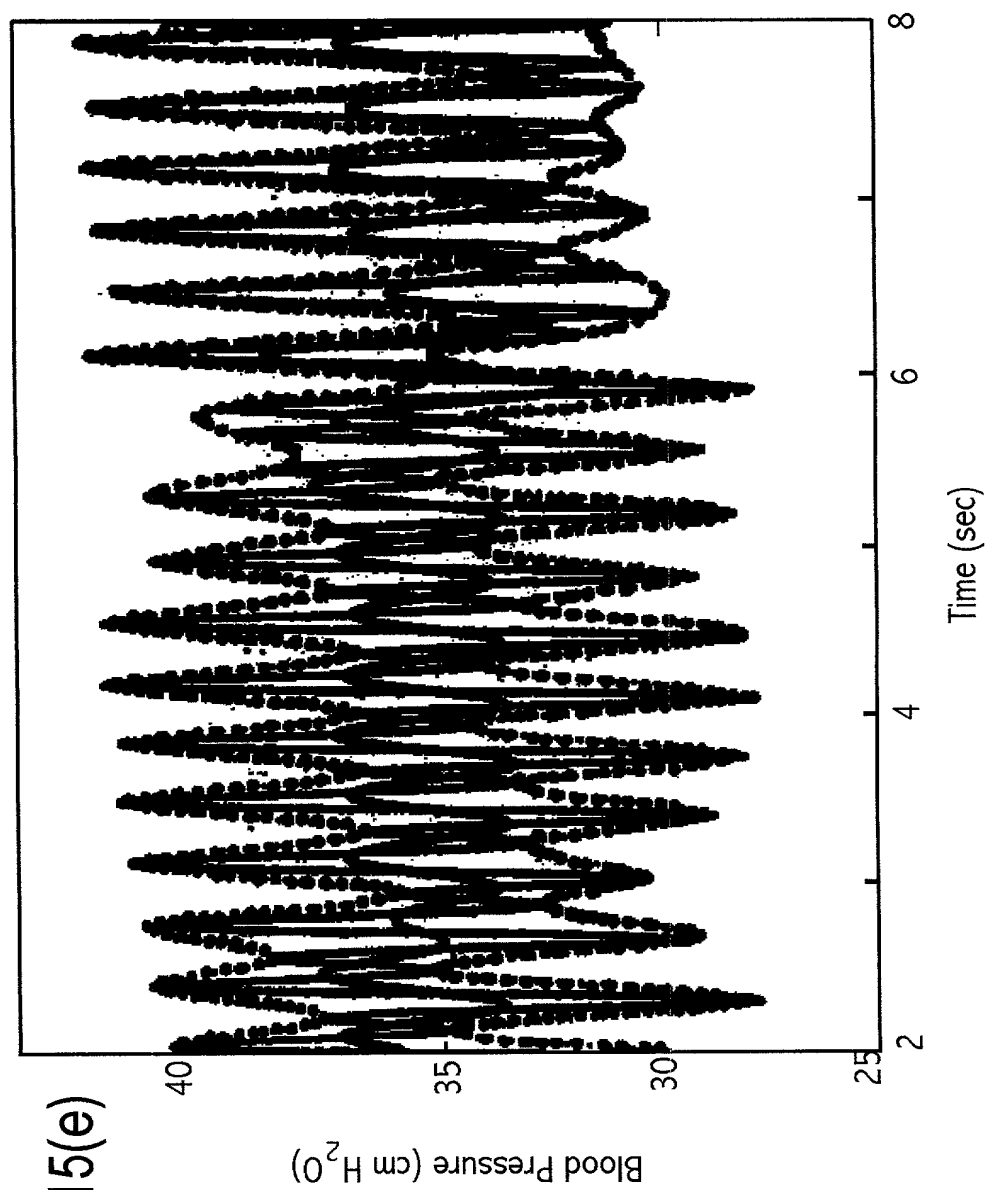


FIG. 15(f)

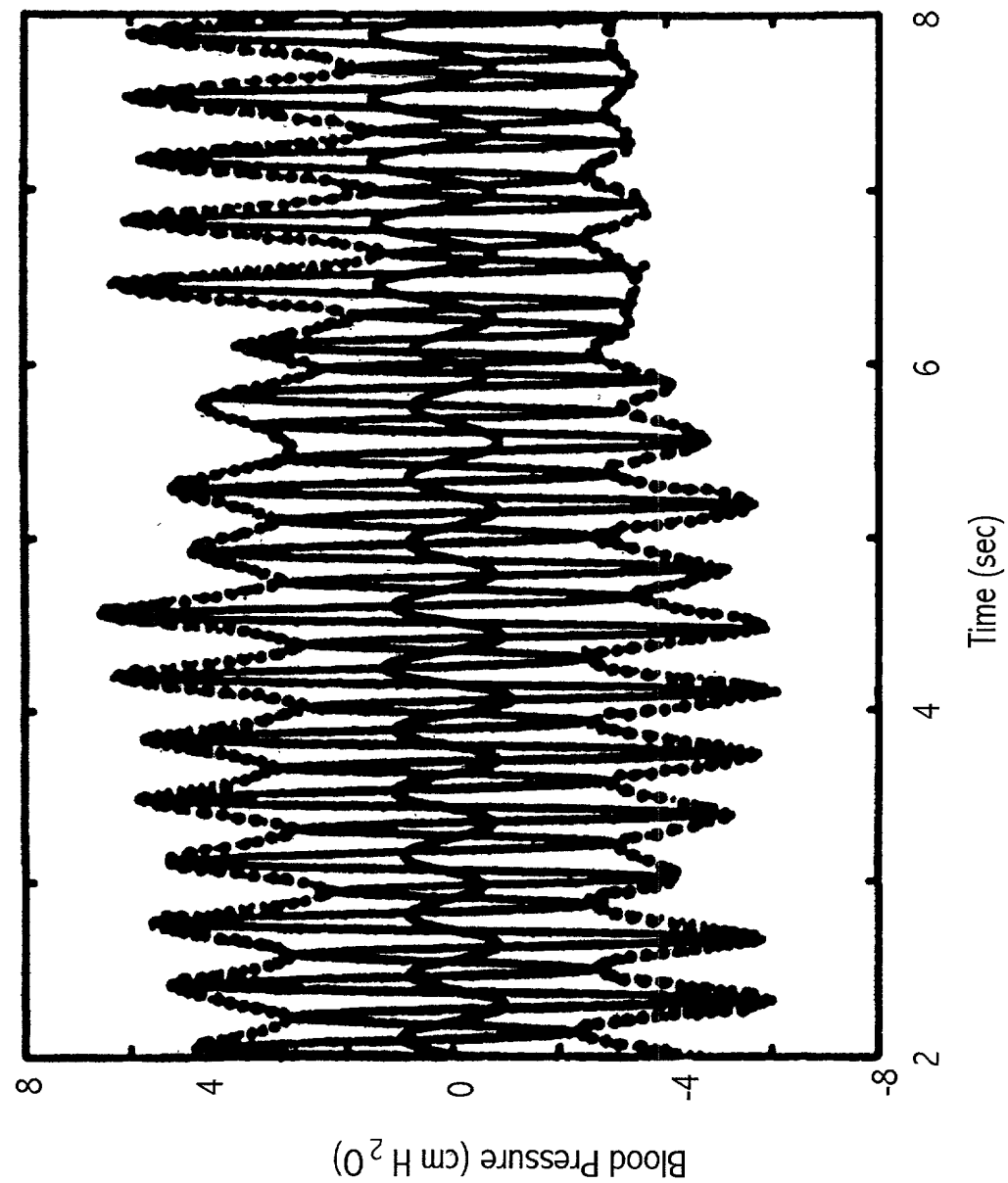


FIG. 15(g)

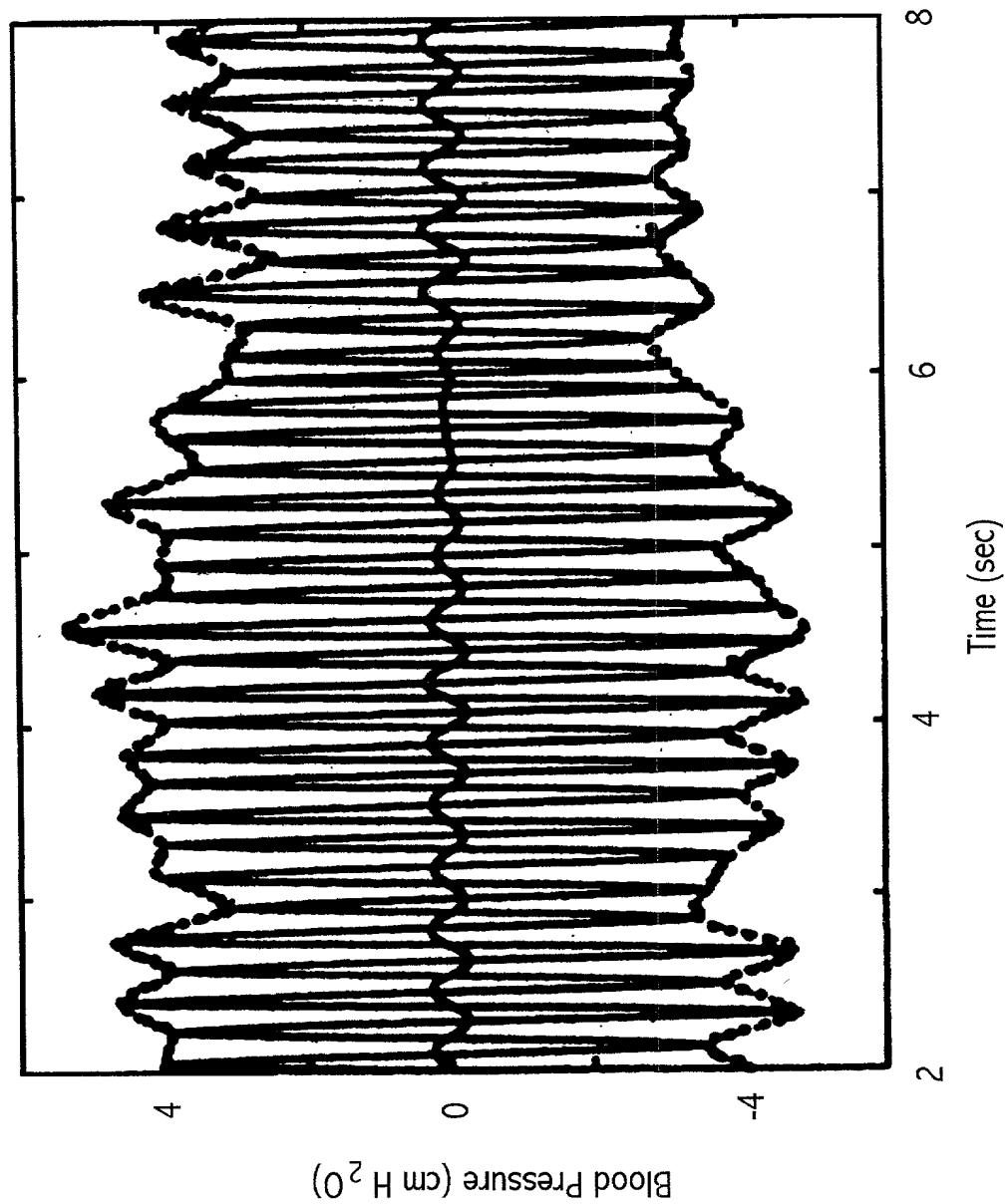


FIG. 15(h)

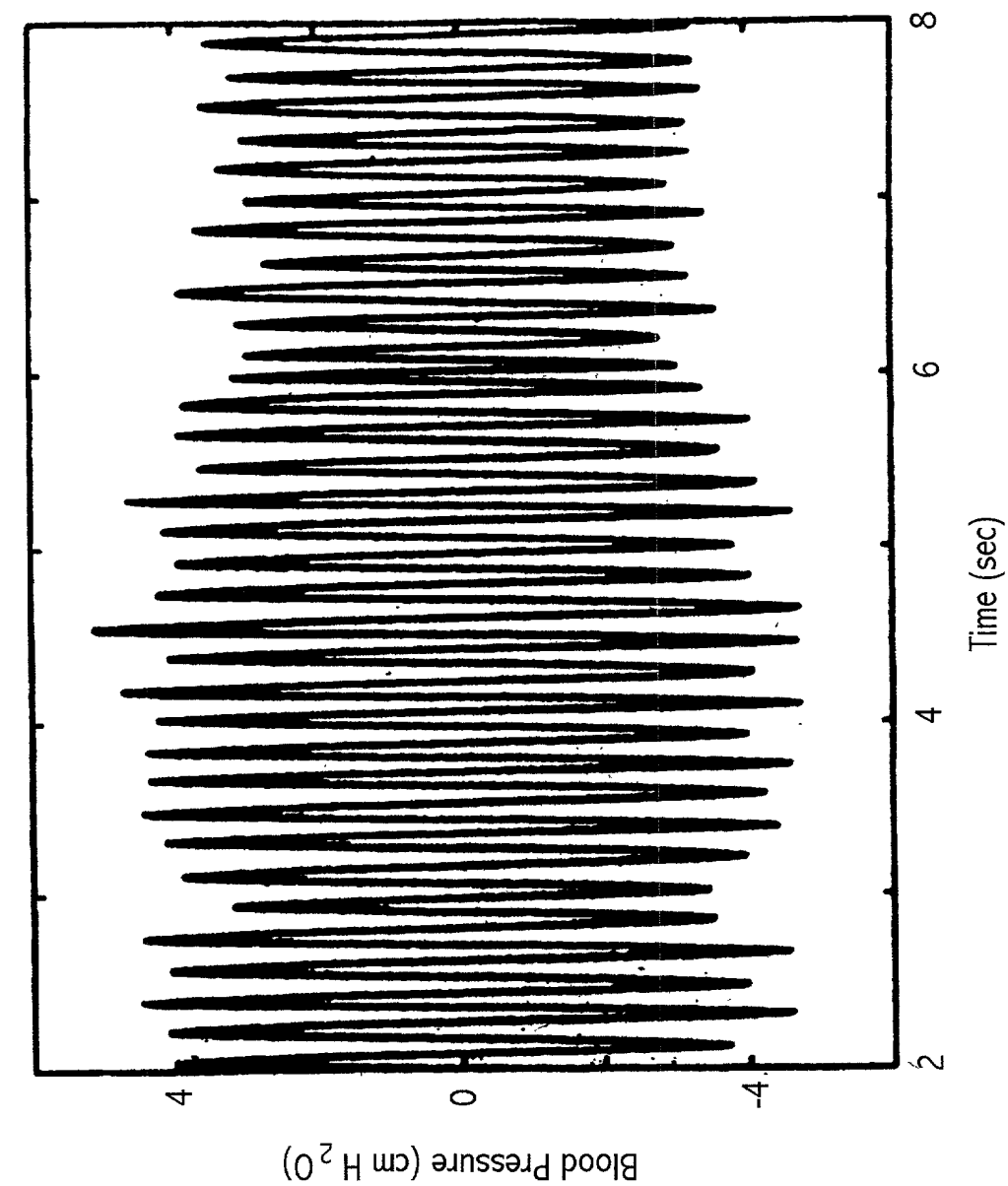


FIG. 16(a)

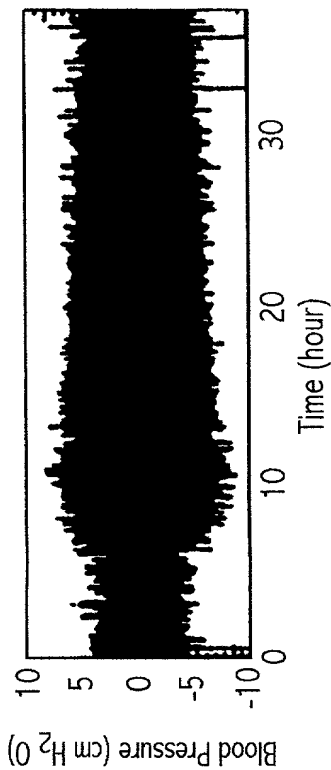


FIG. 16(b)

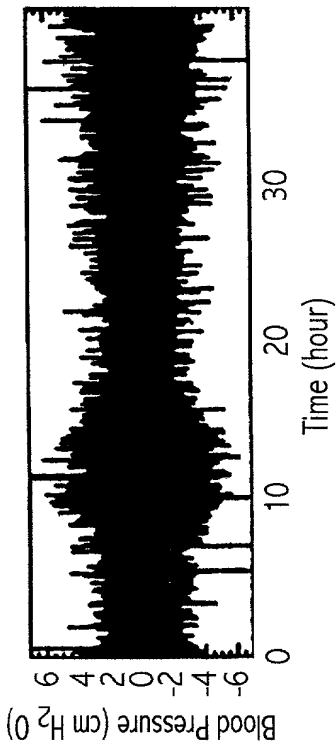


FIG. 16(c)

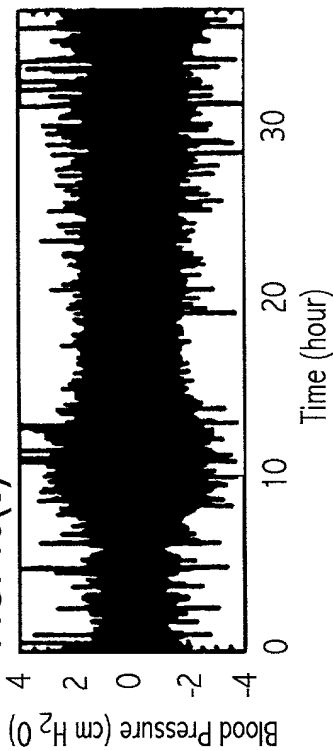


FIG. 16(d)

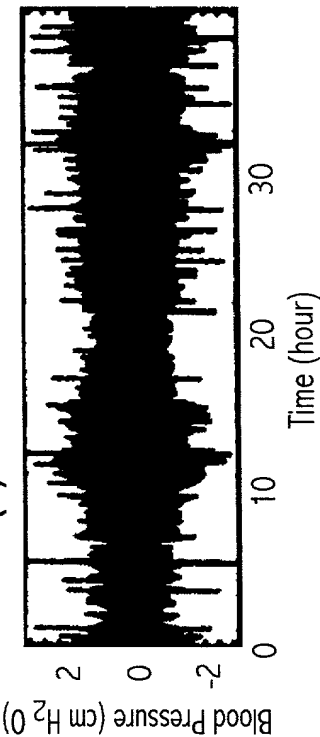


FIG. 16(e)

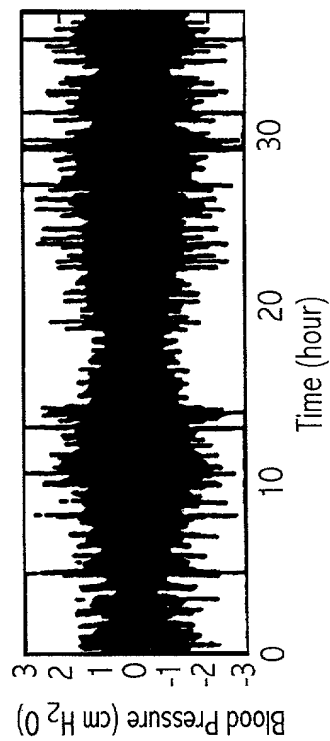


FIG. 16(f)

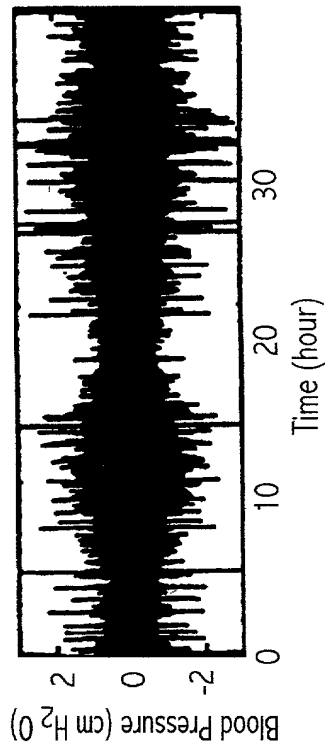


FIG. 16(g)

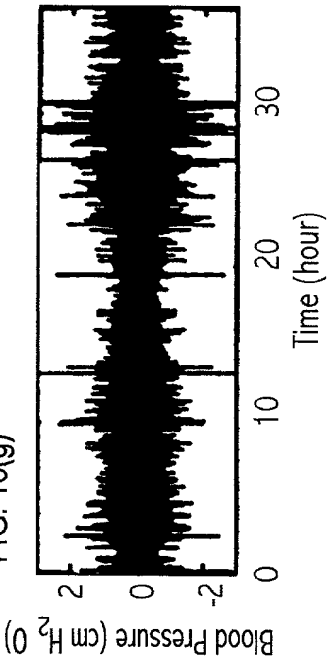


FIG. 16(h)

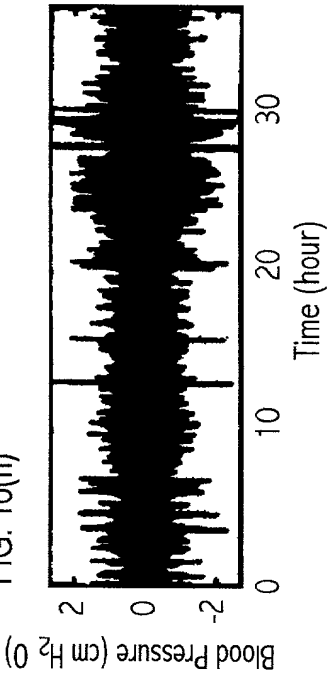


FIG. 16(i)

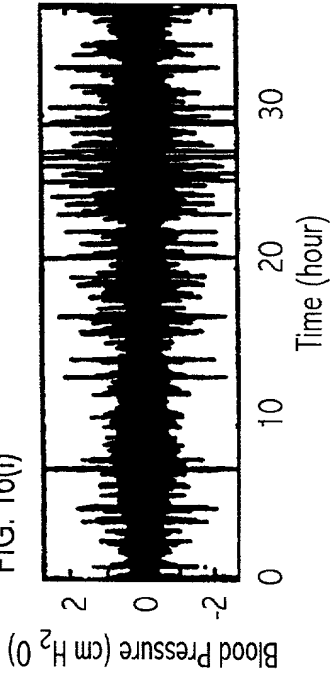


FIG. 16(j)

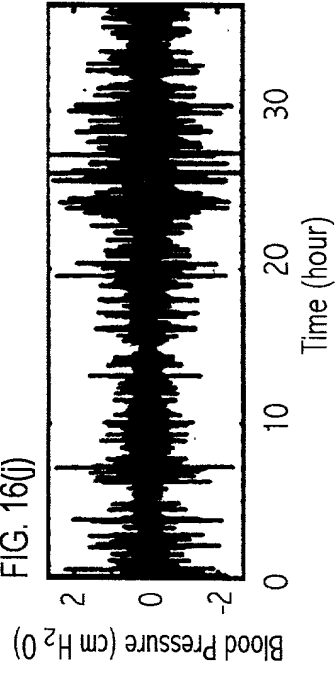


FIG. 16(k)

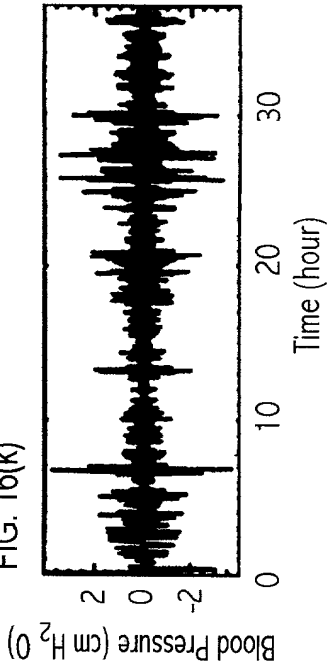


FIG. 16(l)

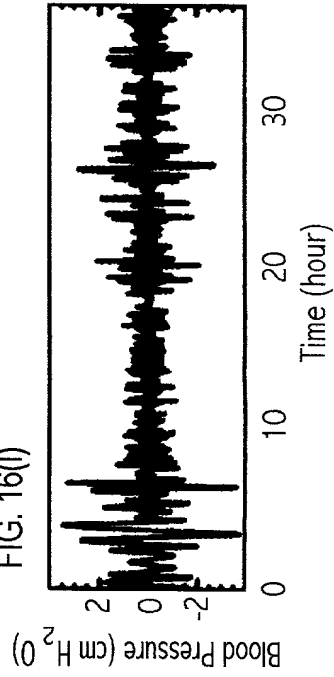


FIG. 16(m)

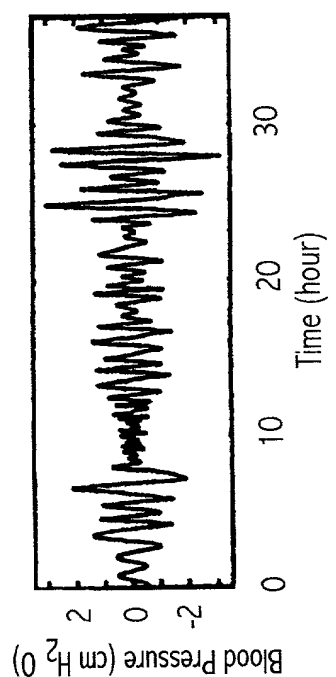


FIG. 16(n)

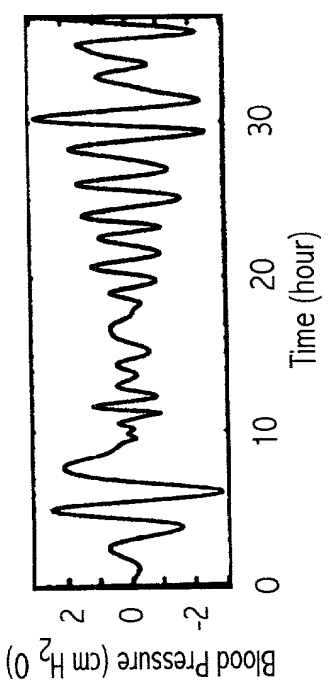


FIG. 16(o)

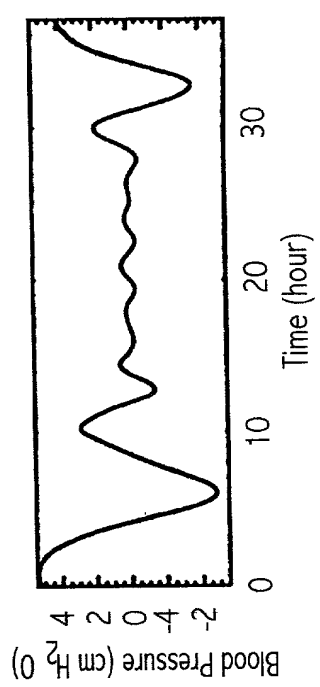


FIG. 16(p)

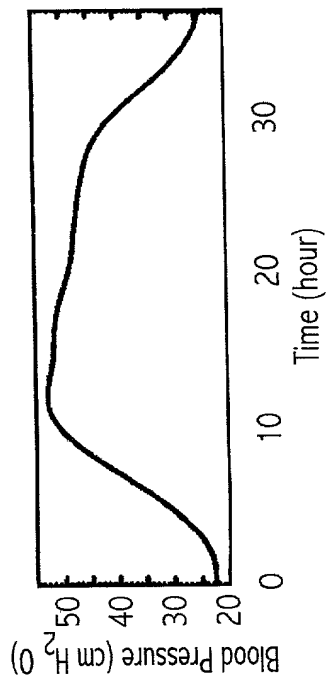


FIG. 17(a)

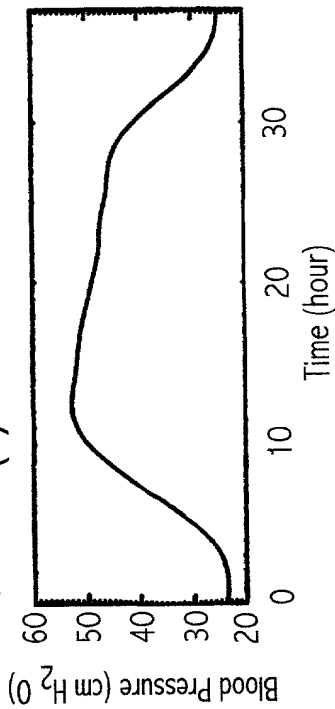


FIG. 17(b)

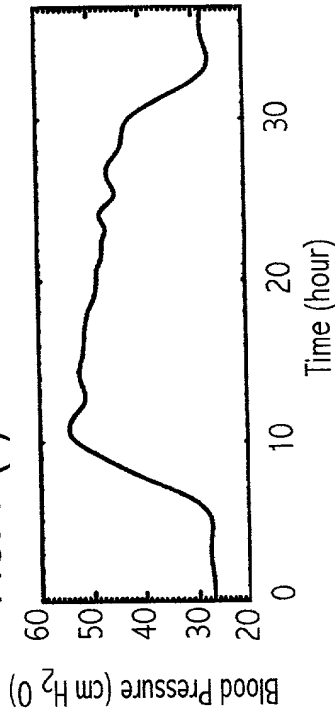


FIG. 17(c)

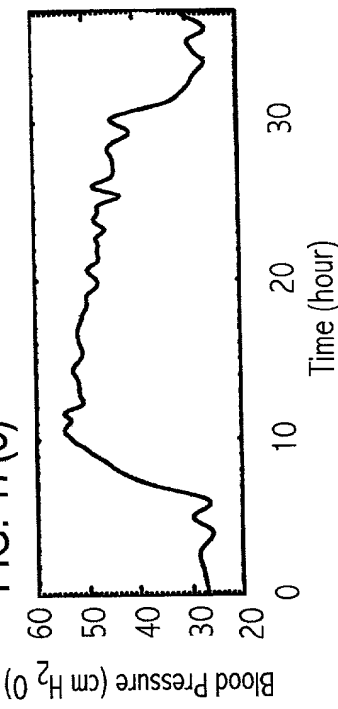


FIG. 17(d)

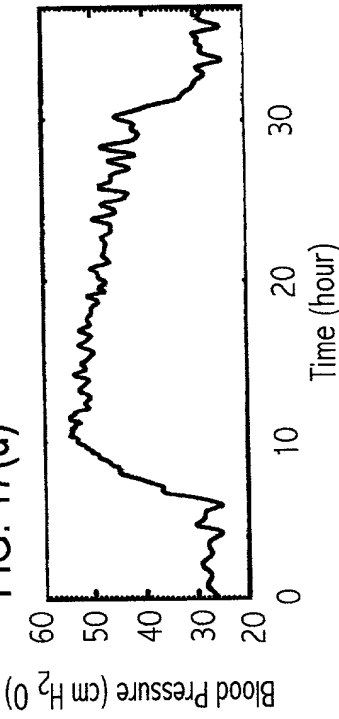


FIG. 17(e)

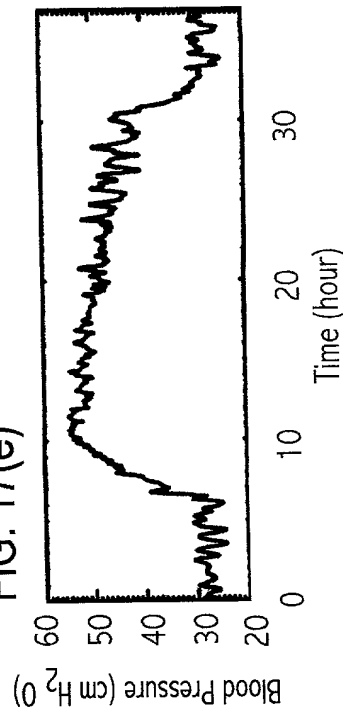


FIG. 17(f)

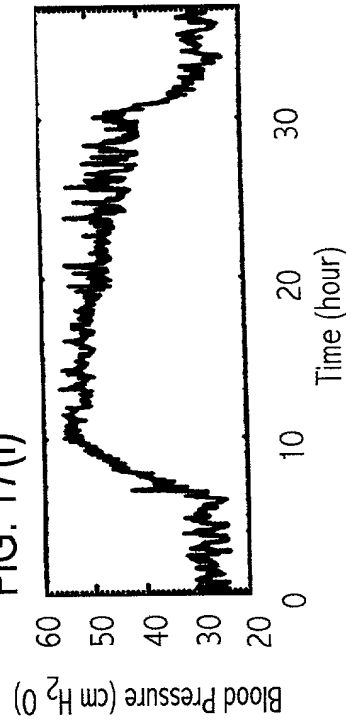


FIG. 18(a)

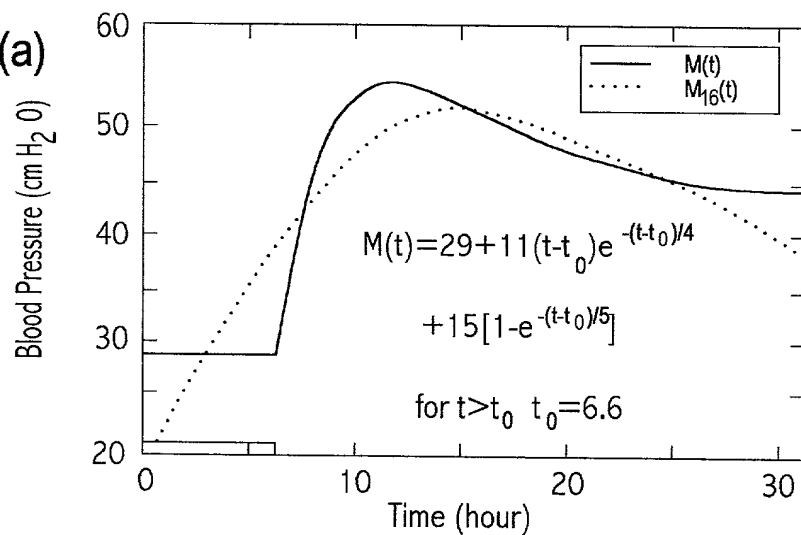


FIG. 18(b)

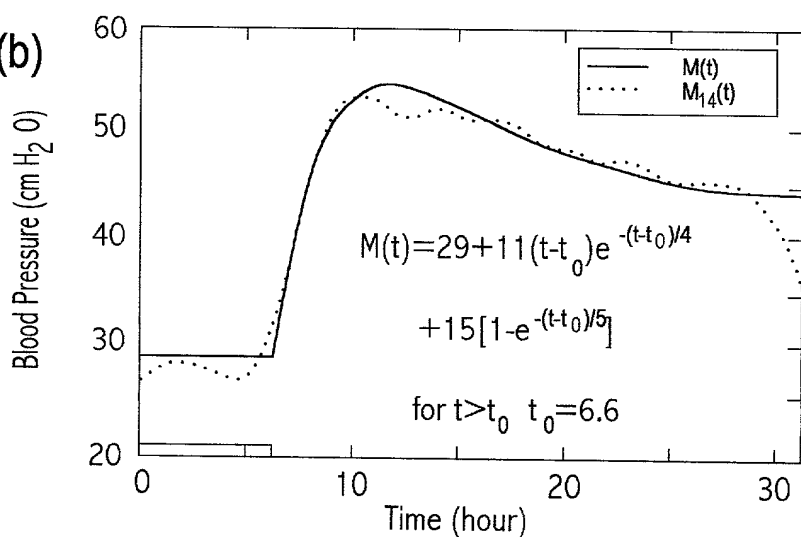


FIG. 18(c)

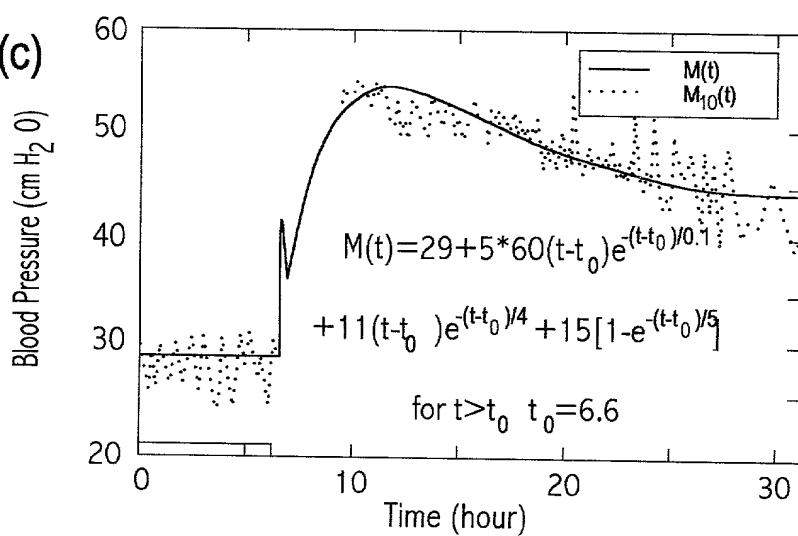


FIG. 19(a)

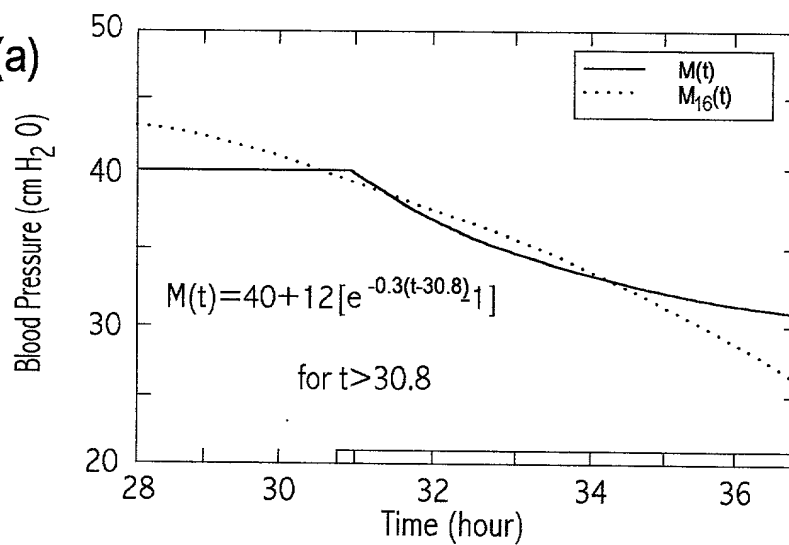


FIG. 19(b)

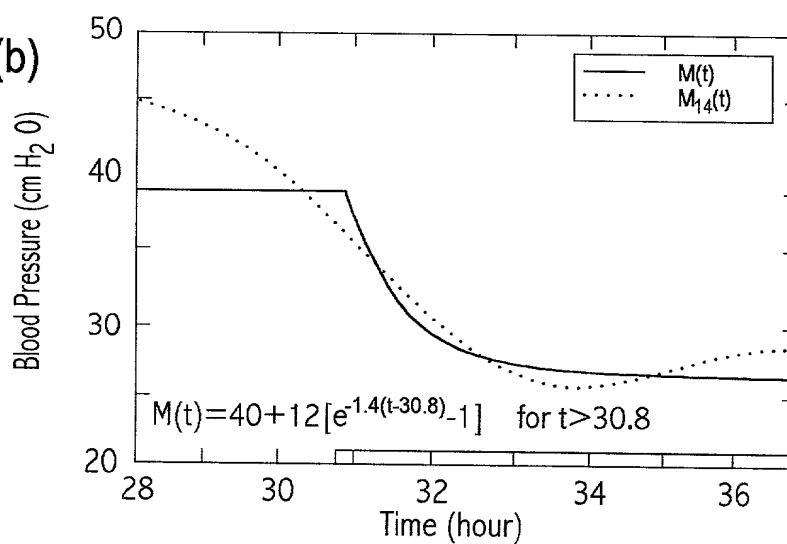


FIG. 19(c)

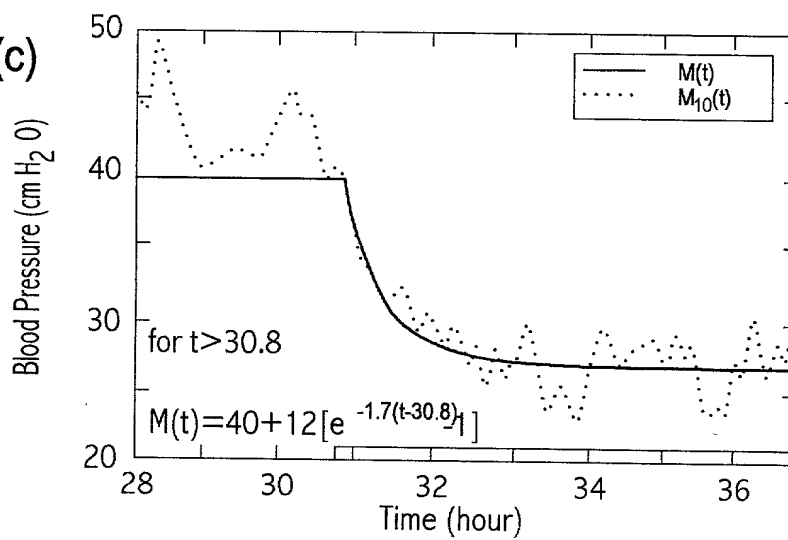


FIG. 20(a)

$k=1$

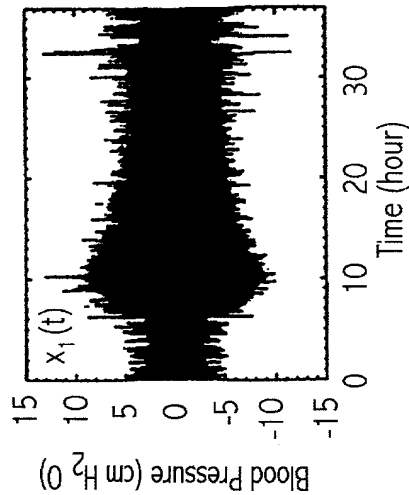


FIG. 20(b)

$k=2$

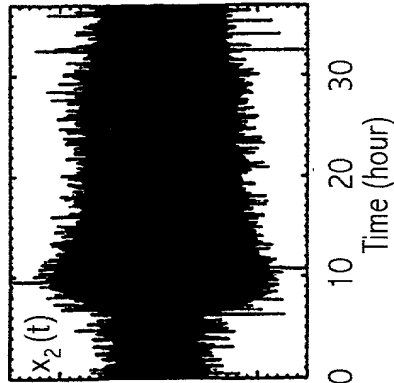


FIG. 20(c)

$k=4$

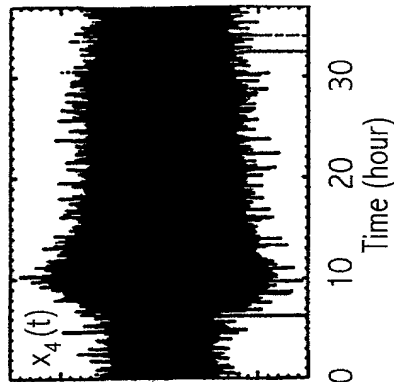


FIG. 20(d)

$k=6$

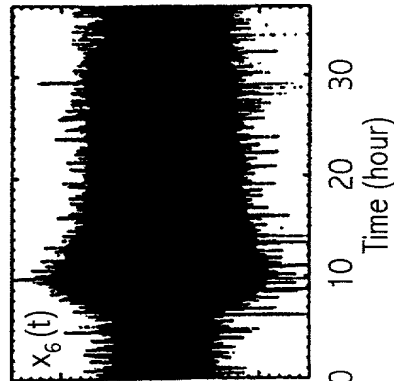


FIG. 21

E6(t)

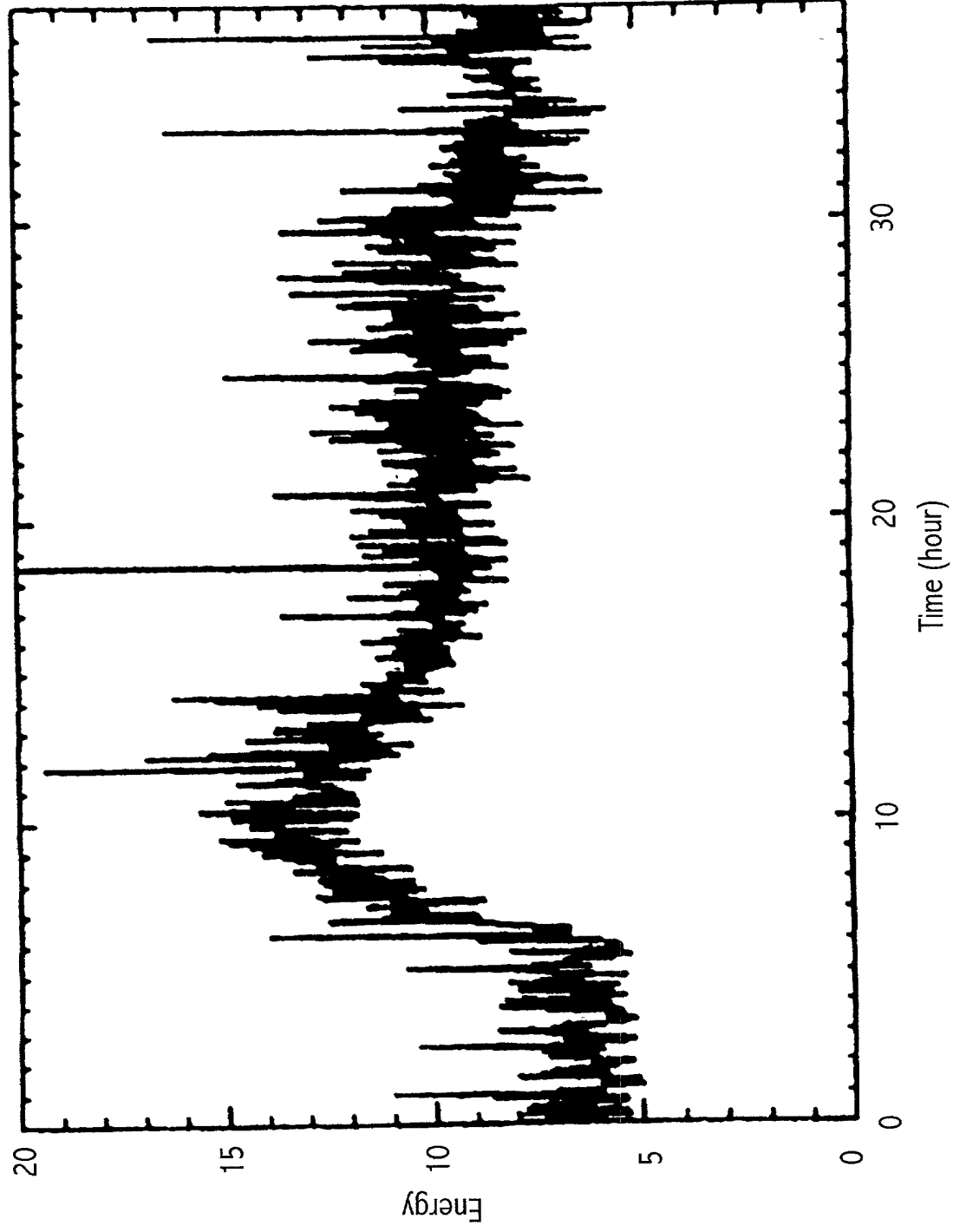


FIG. 23(a)

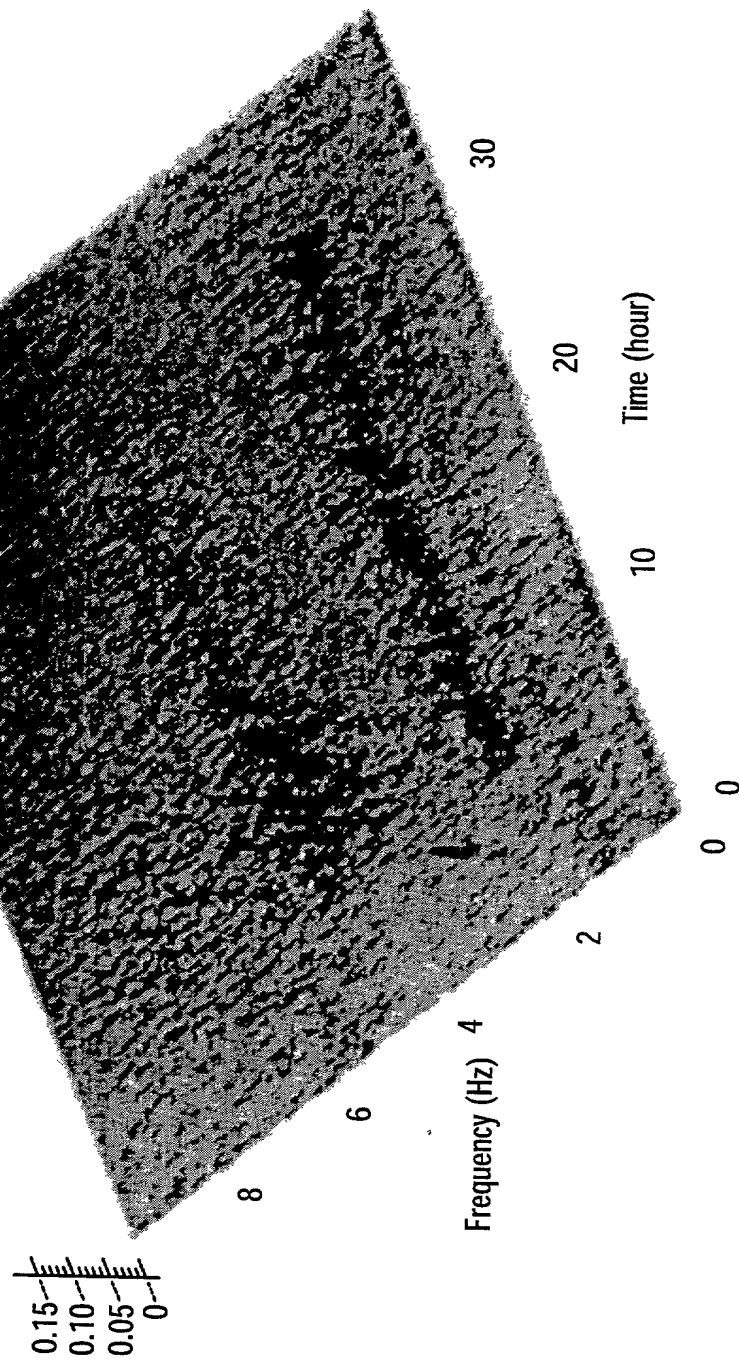


FIG. 23(a) is a 3D surface plot showing a noisy surface over a frequency and time domain. The vertical axis is labeled with values 0, 0.05, 0.10, and 0.15. The horizontal axis is labeled 'Frequency (Hz)' and has values 2, 4, 6, and 8. The depth axis is labeled 'Time (hour)' and has values 0, 10, 20, and 30.

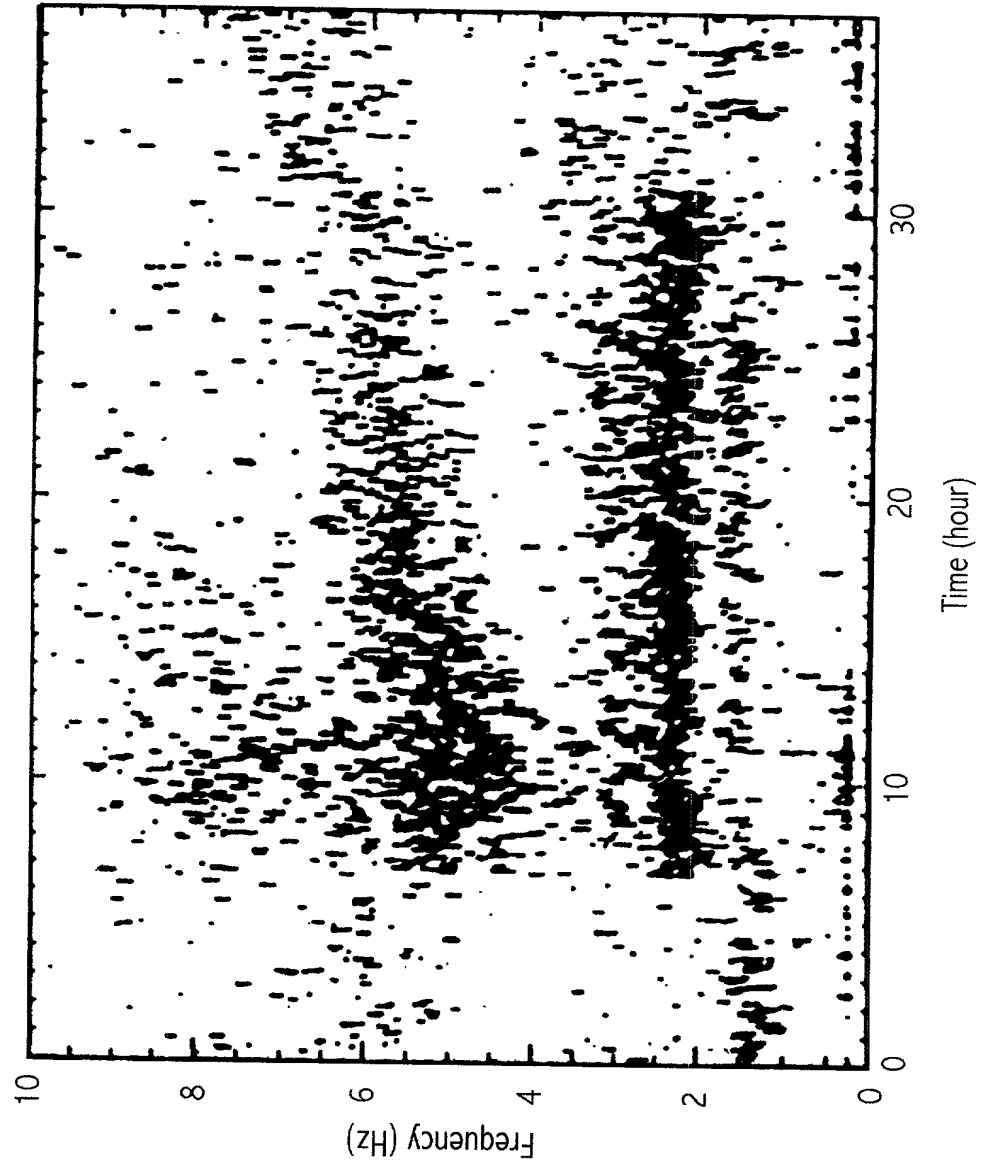


FIG. 23(b)

FIG. 23(b)

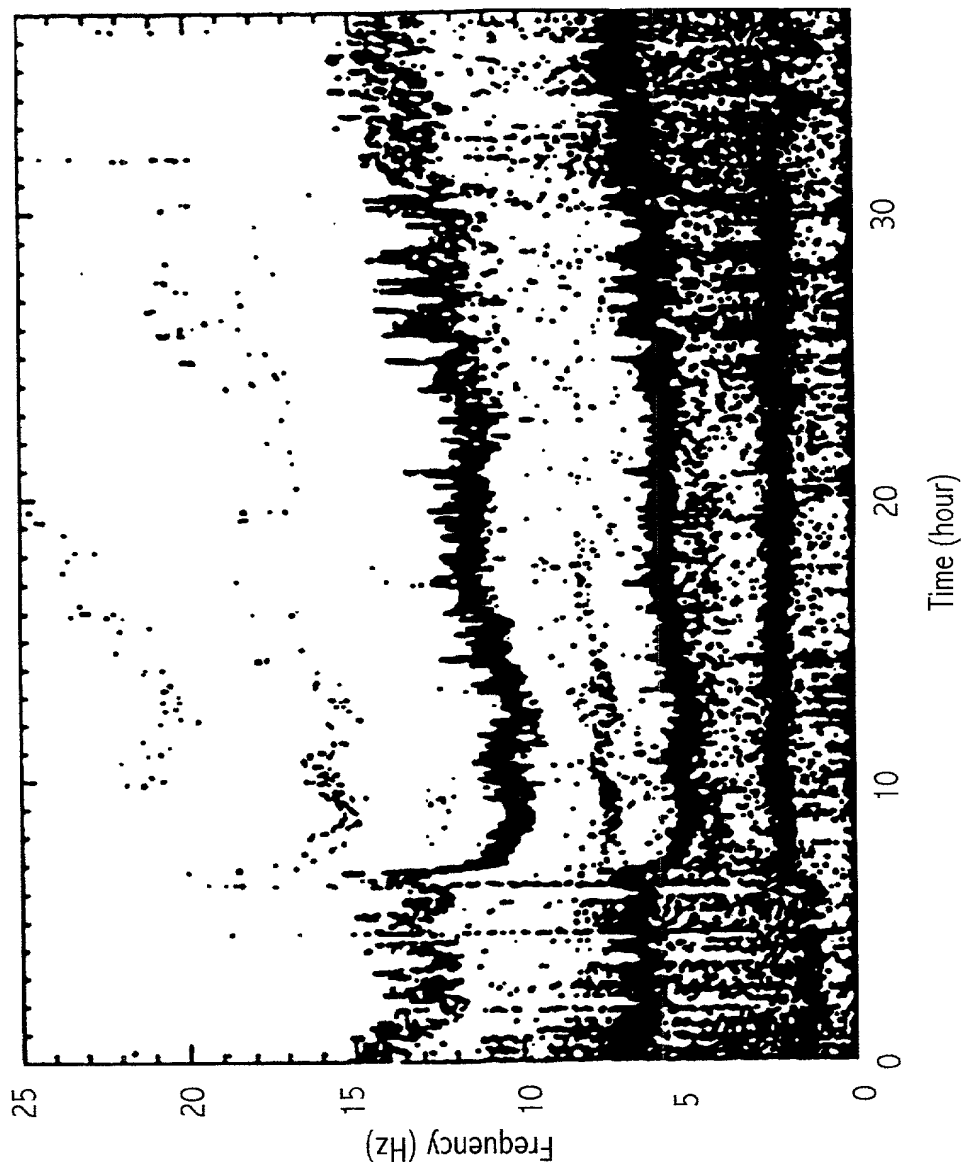


FIG. 24

FIG. 24 is a spectrogram plot showing Frequency (Hz) vs Time (hour). The y-axis ranges from 0 to 25 Hz, and the x-axis ranges from 0 to 30 hours. The plot shows a dense, noisy pattern of black dots, with a prominent horizontal band of high intensity around 10-15 Hz, suggesting a continuous signal or noise floor. There are also scattered dots at higher frequencies, up to 25 Hz.

FIG. 25

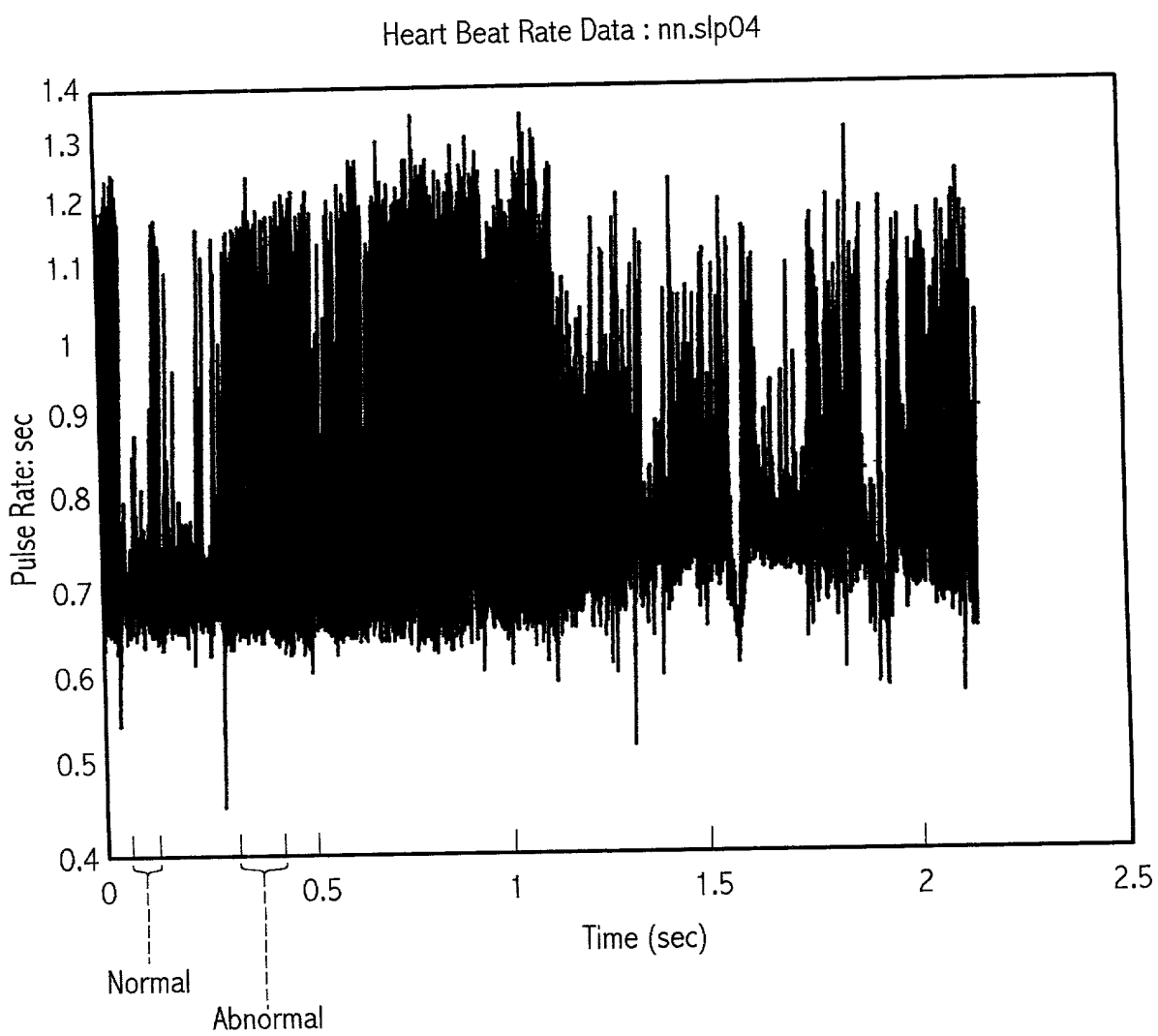
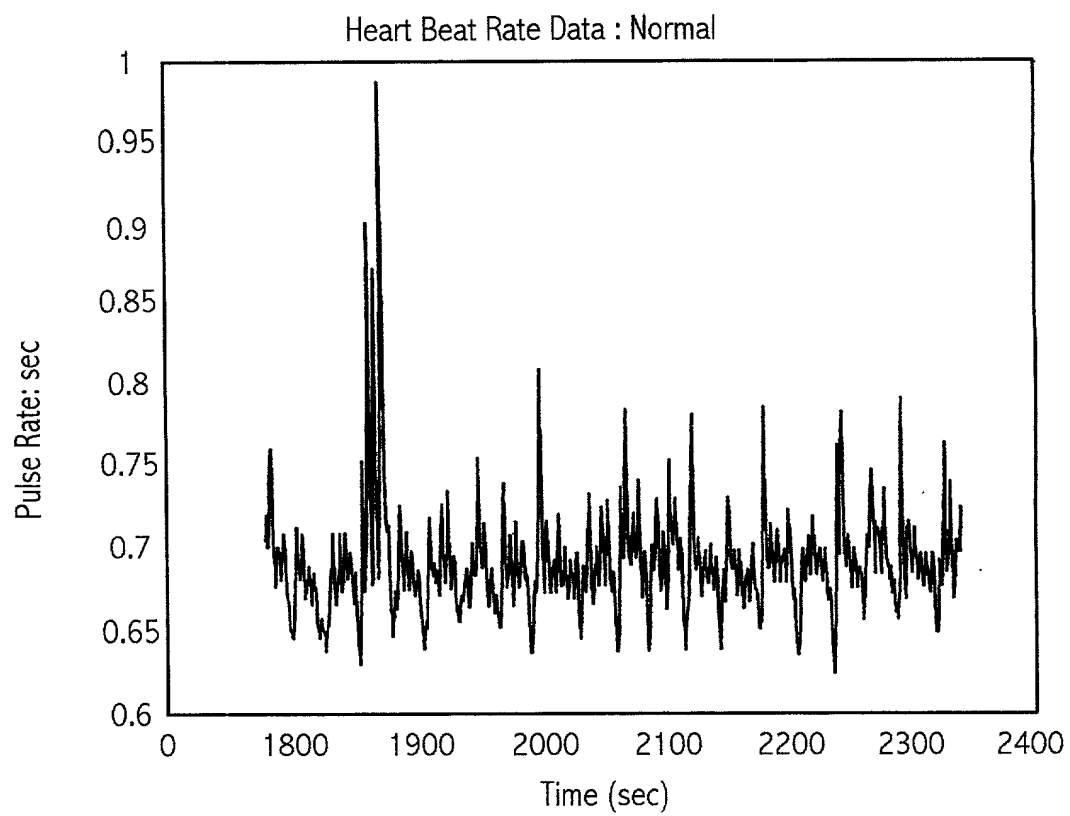


FIG. 26



IMF Normal

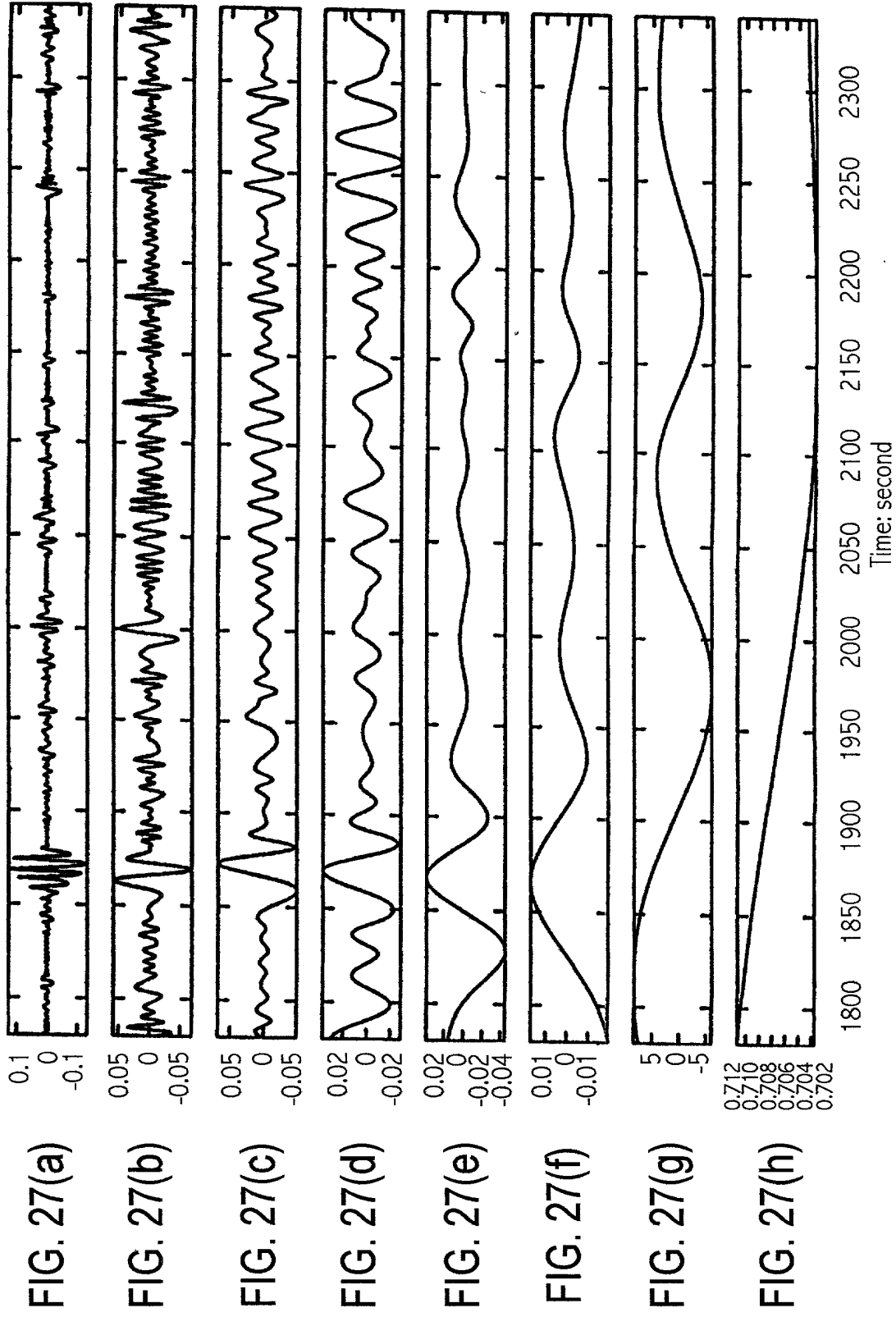


FIG. 28

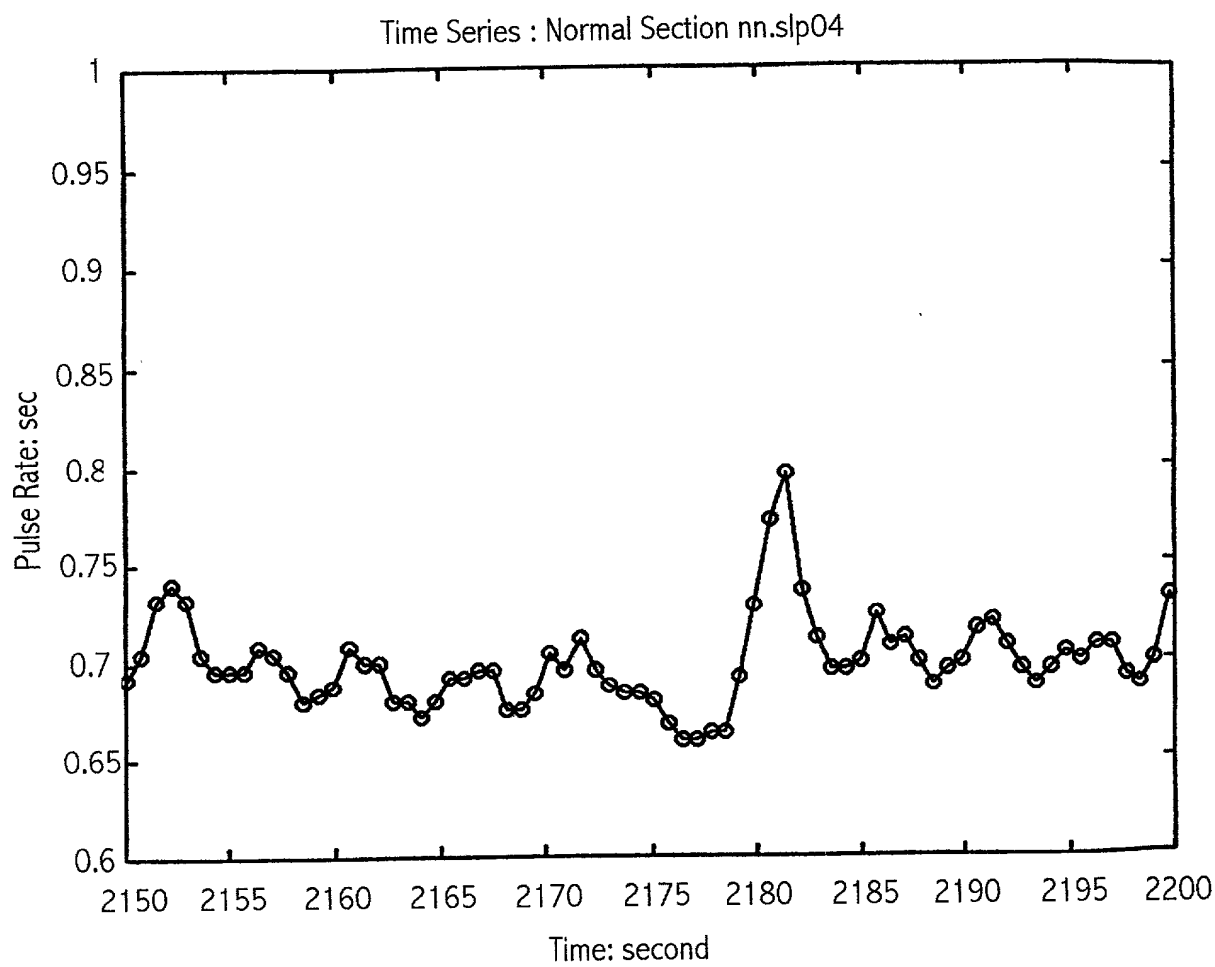


FIG. 29

Hilbert Spectrum : Normal

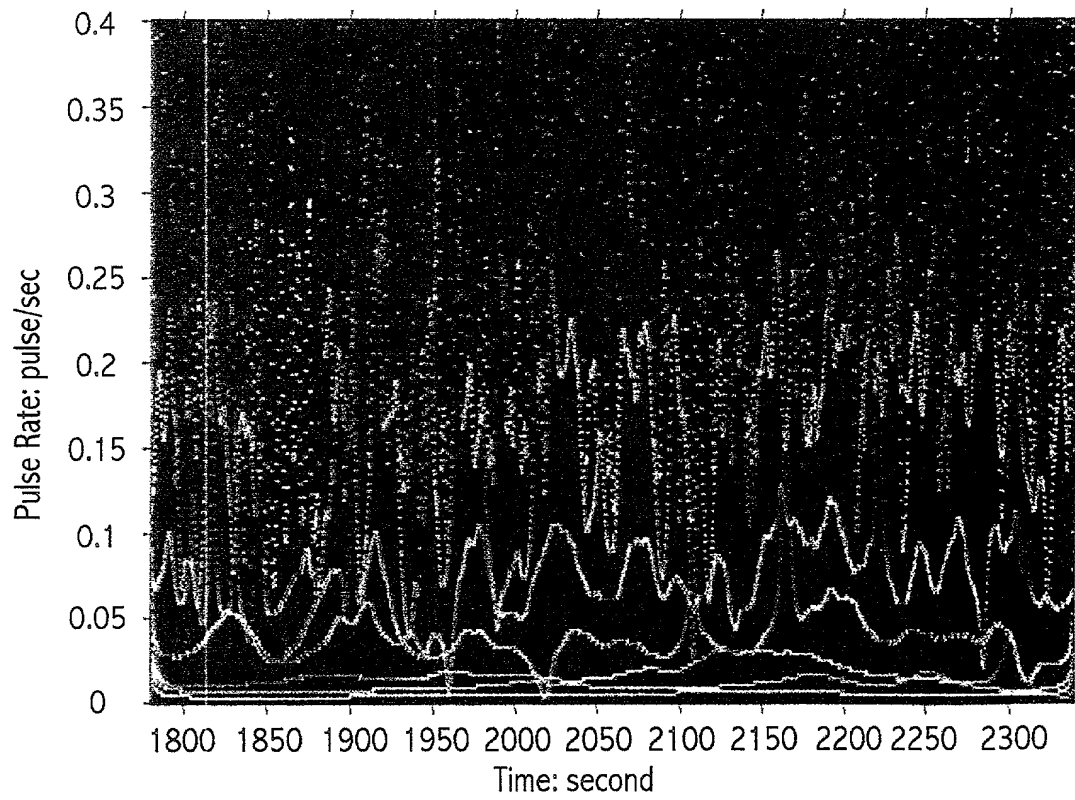
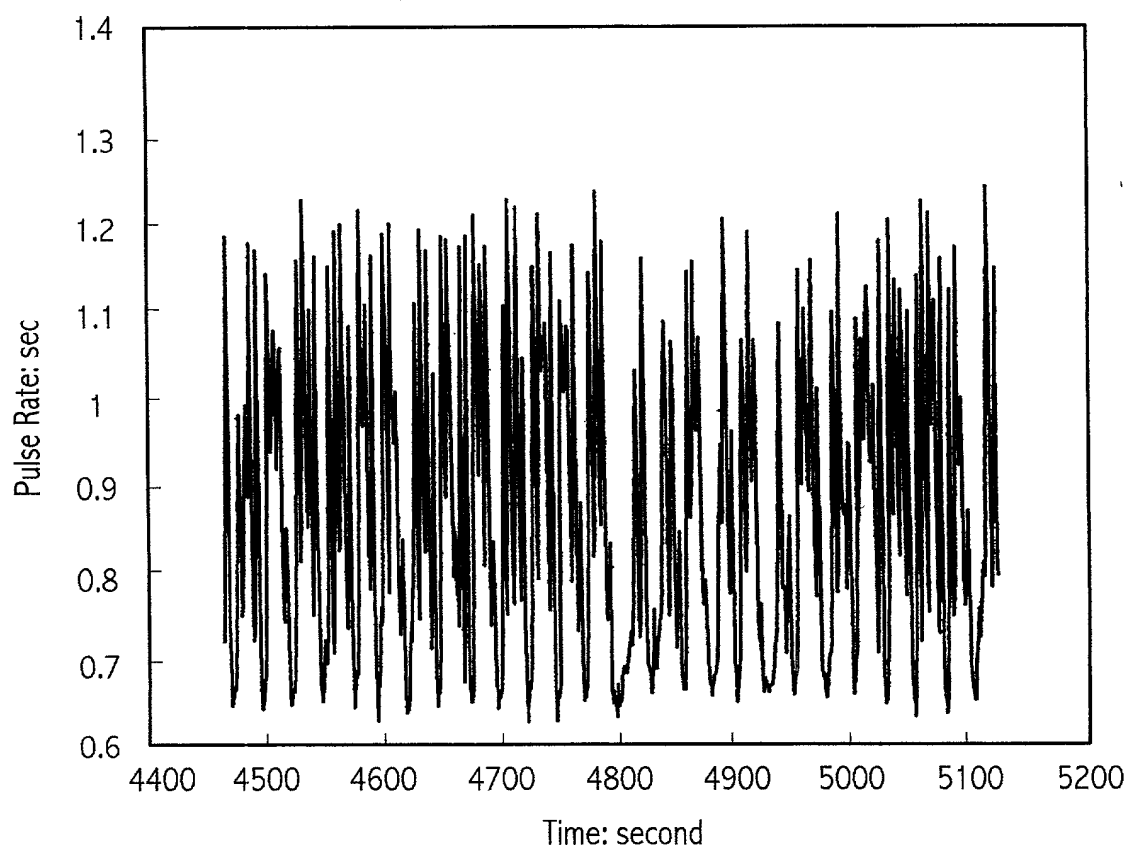


FIG. 30

Heart Beat Rate Data : Abnormal



IMF Abnormal

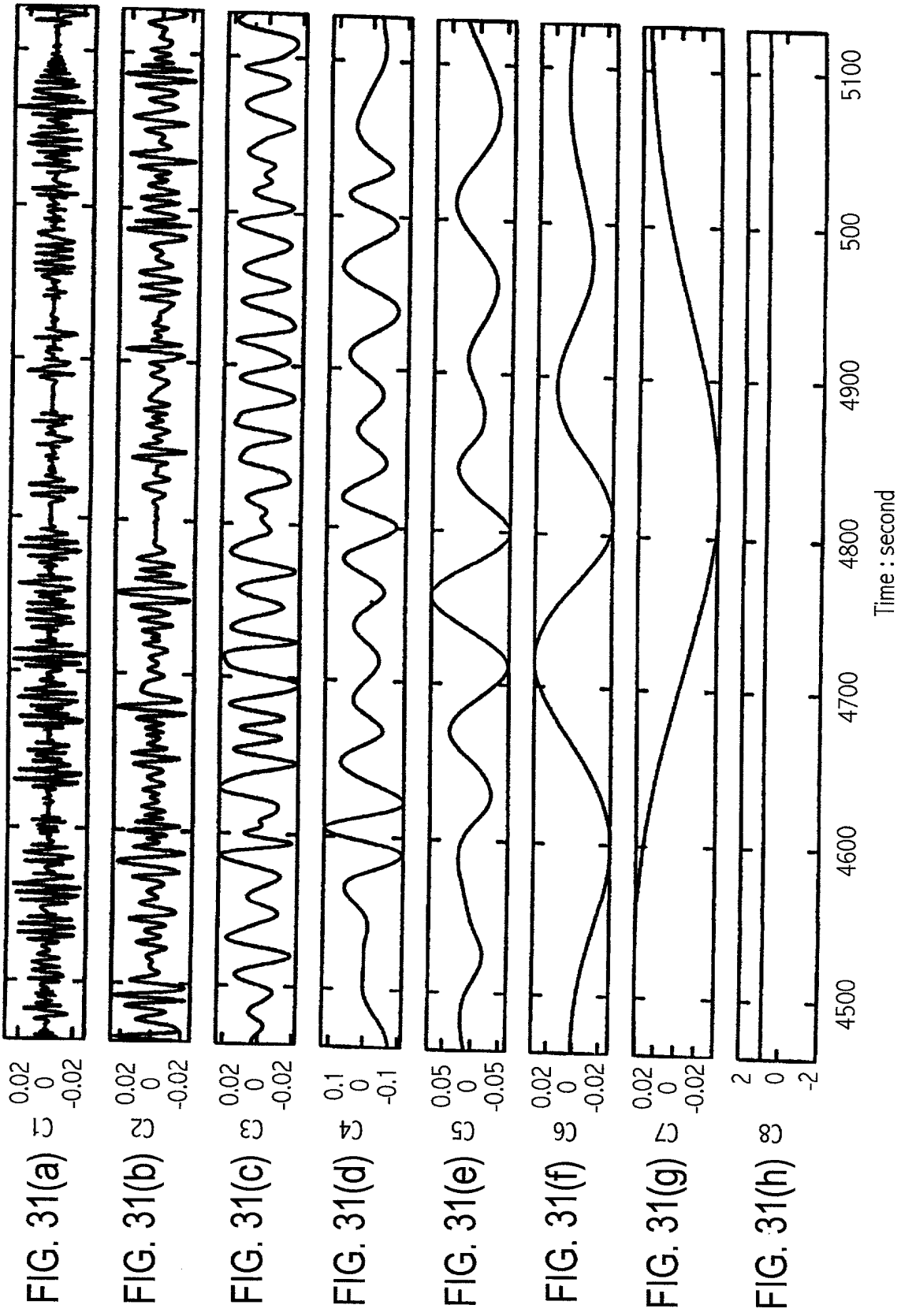


FIG. 32

Time Series : Abnormal Section nn.slp04

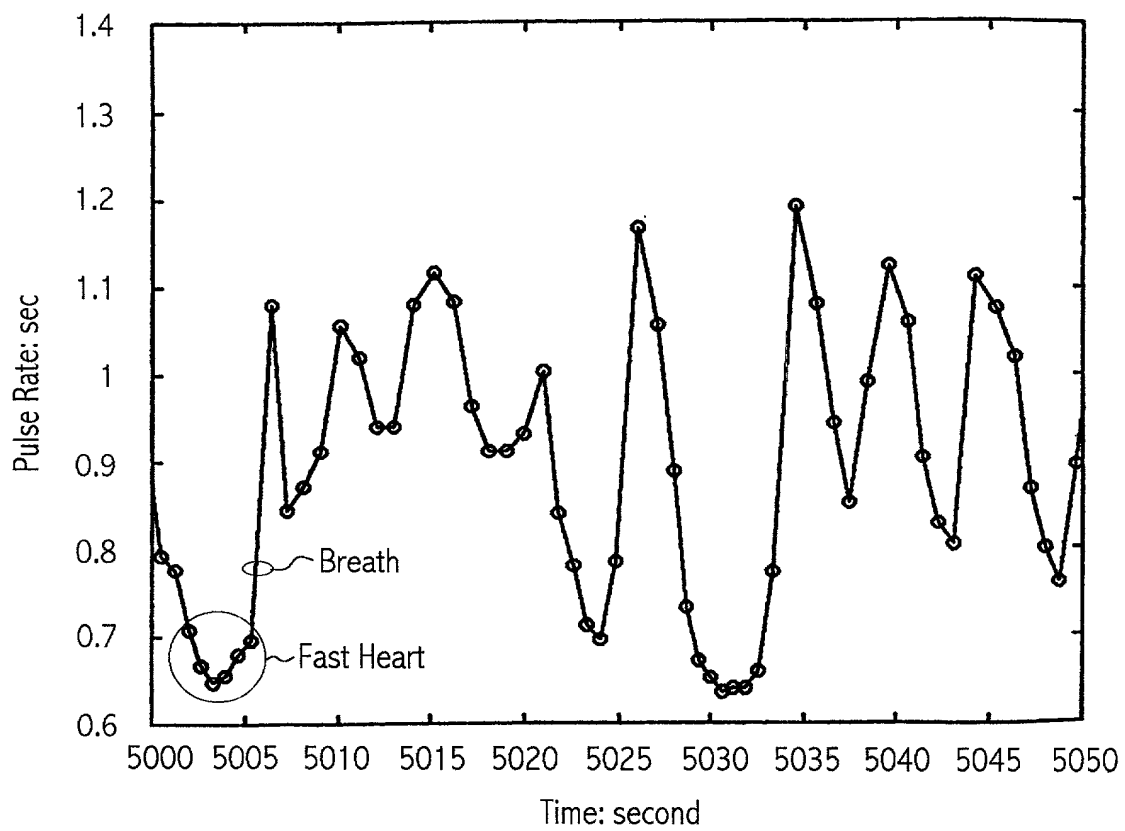


FIG. 33

Hilbert Spectrum

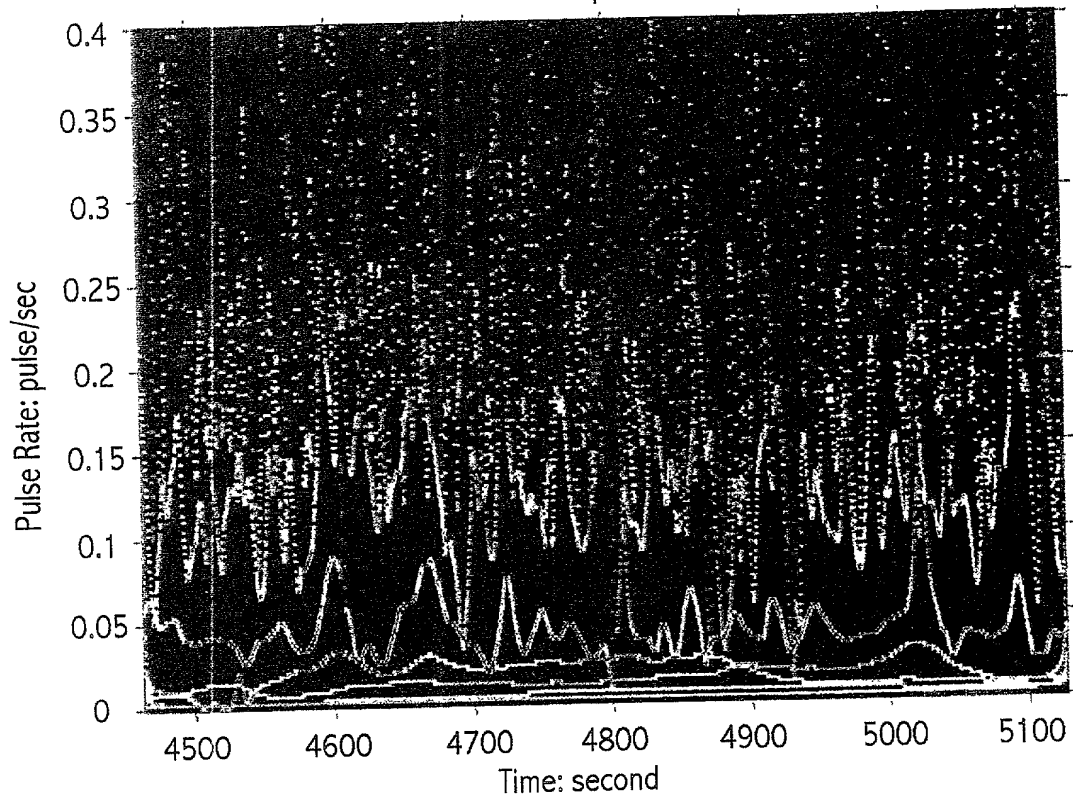
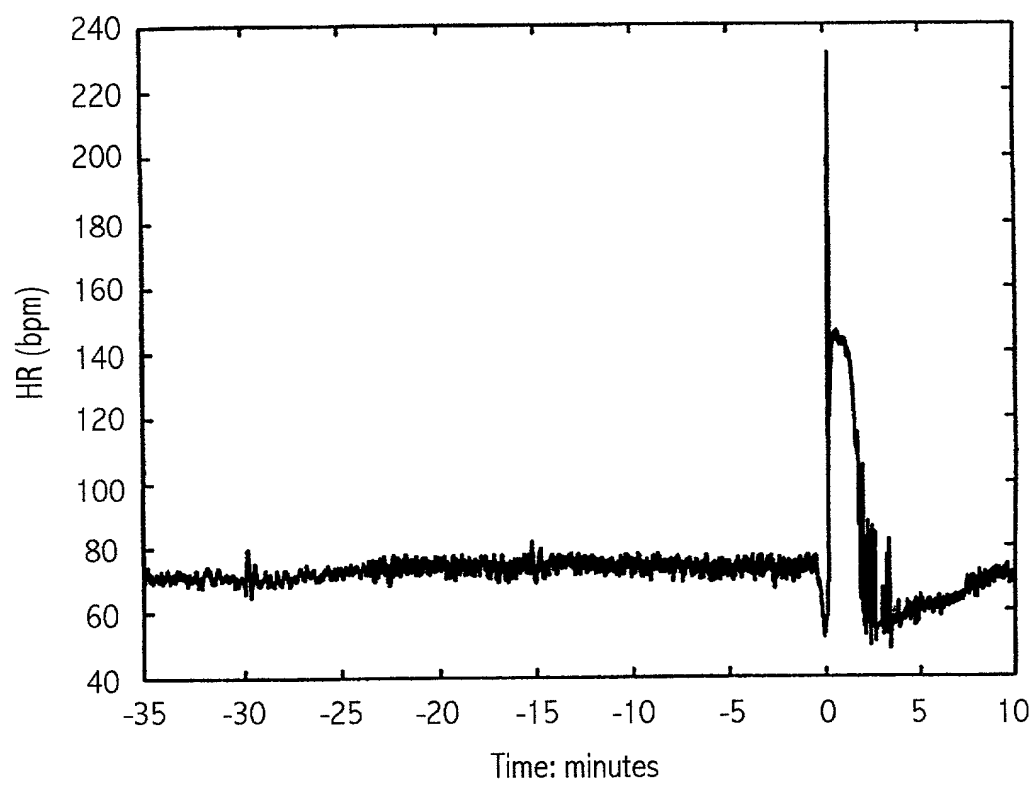
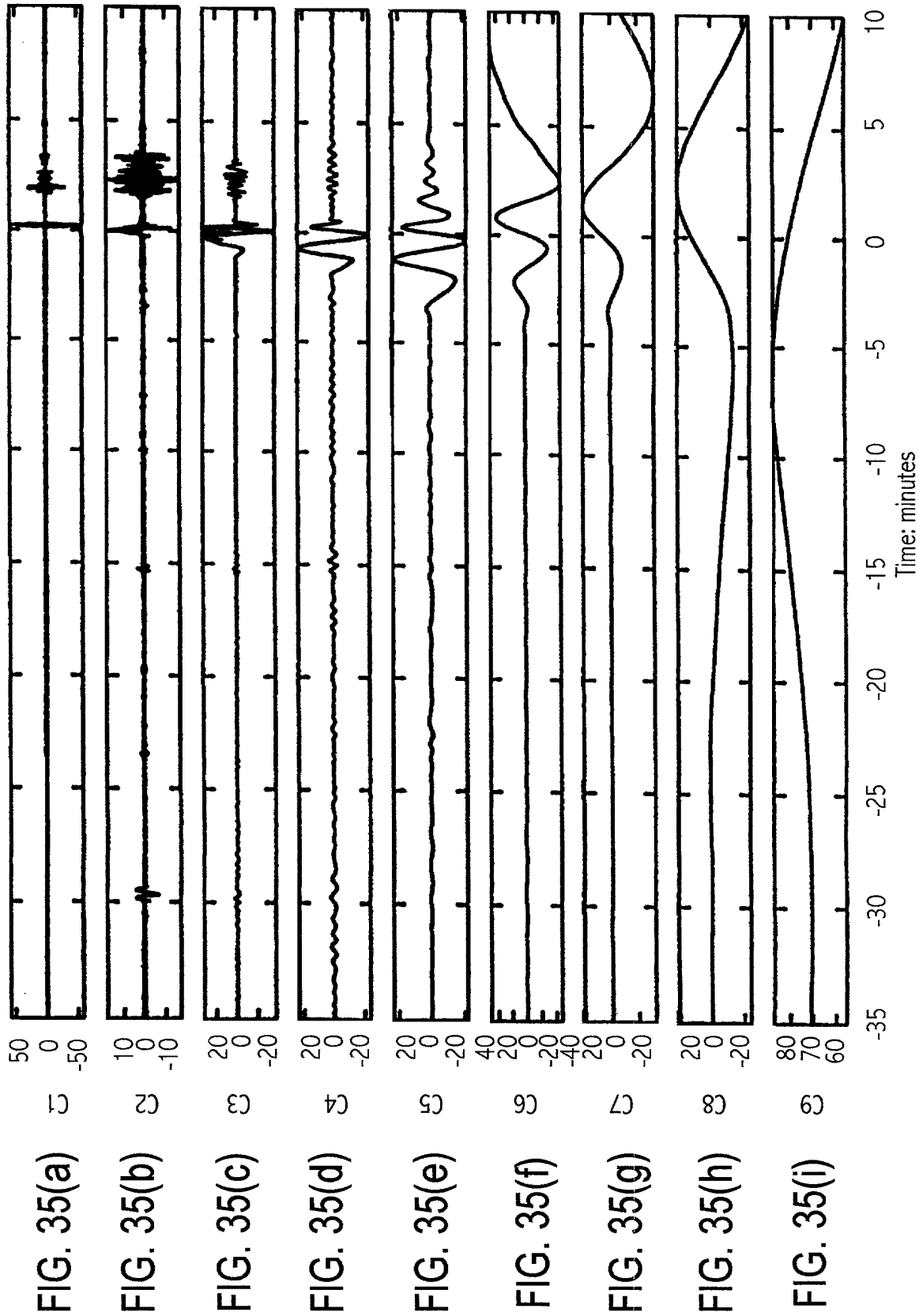


FIG. 34

Seizure Data





Intrinsic Mode Decomposition

FIG. 36(a)

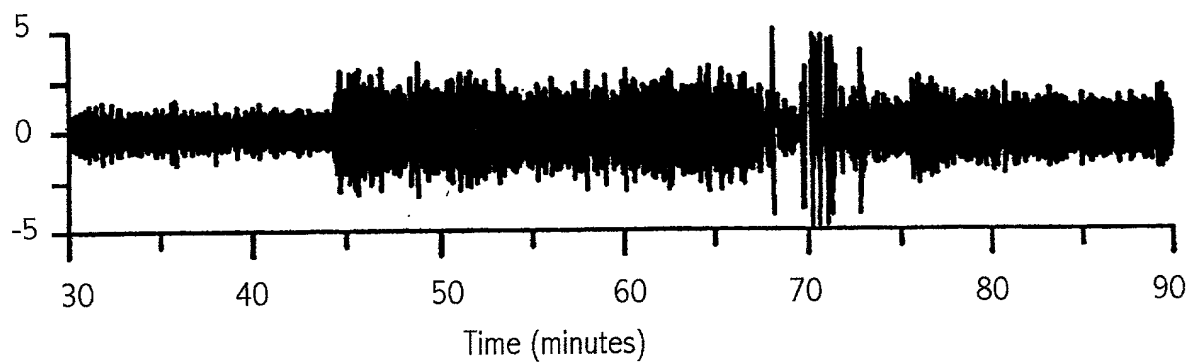


FIG. 36(b)

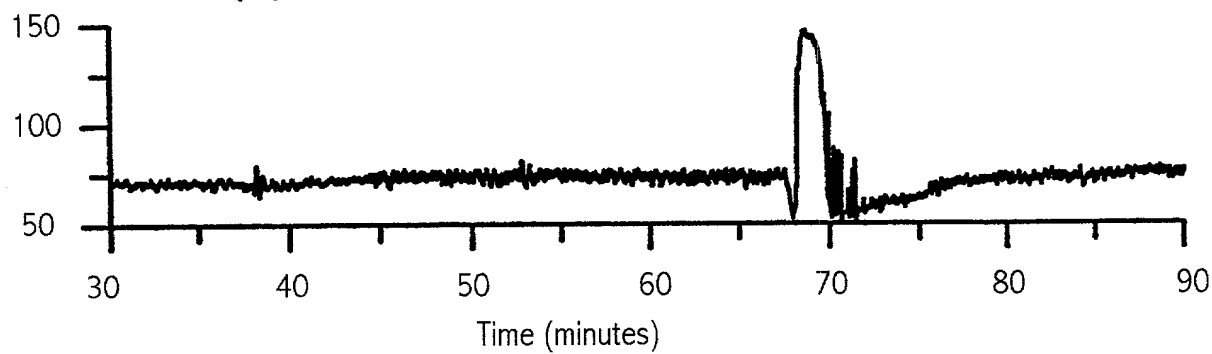


FIG. 36(c)

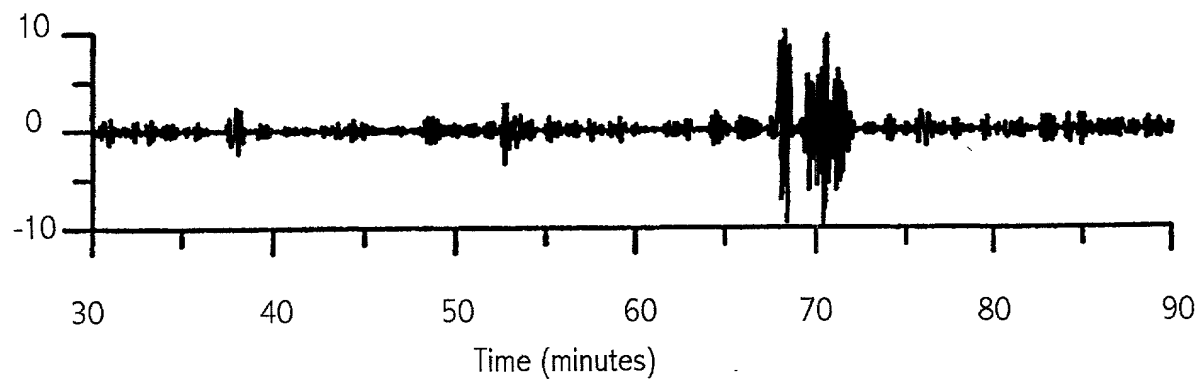


FIG. 37

Hilbert Spectrum Seizure Data

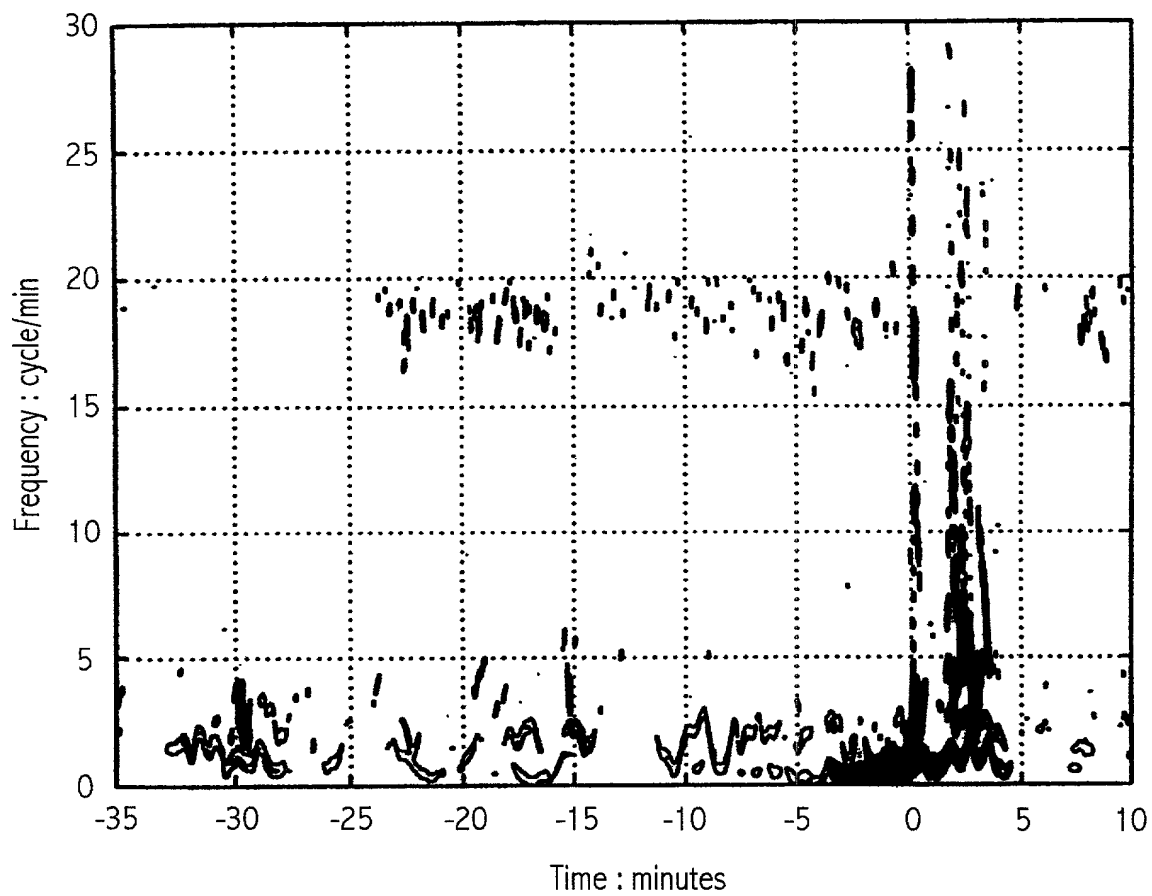
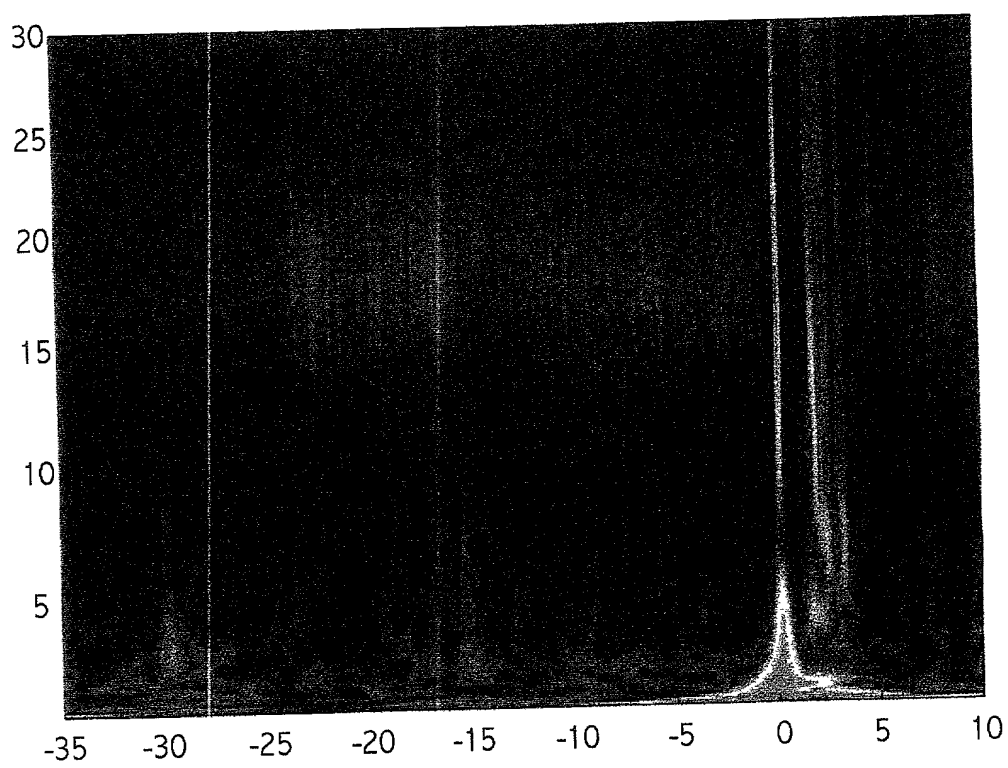


FIG. 38



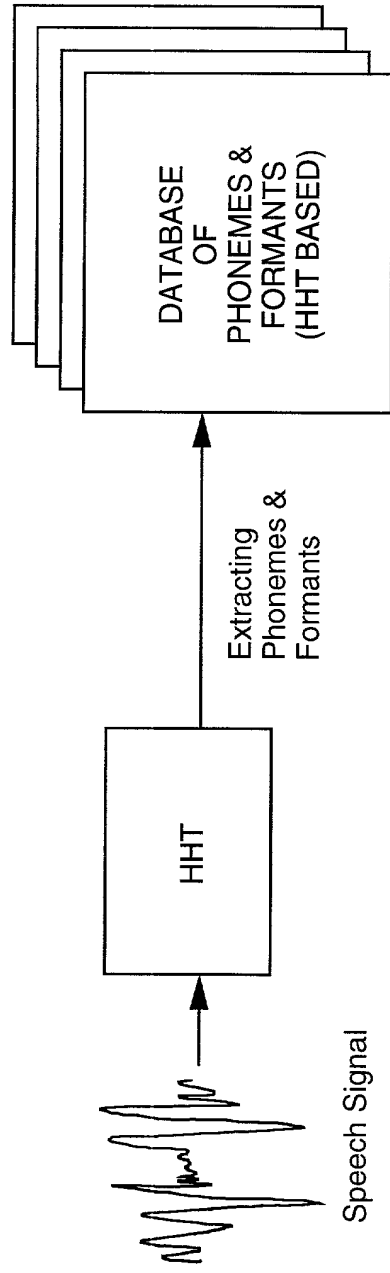


FIG. 39

FIG. 41

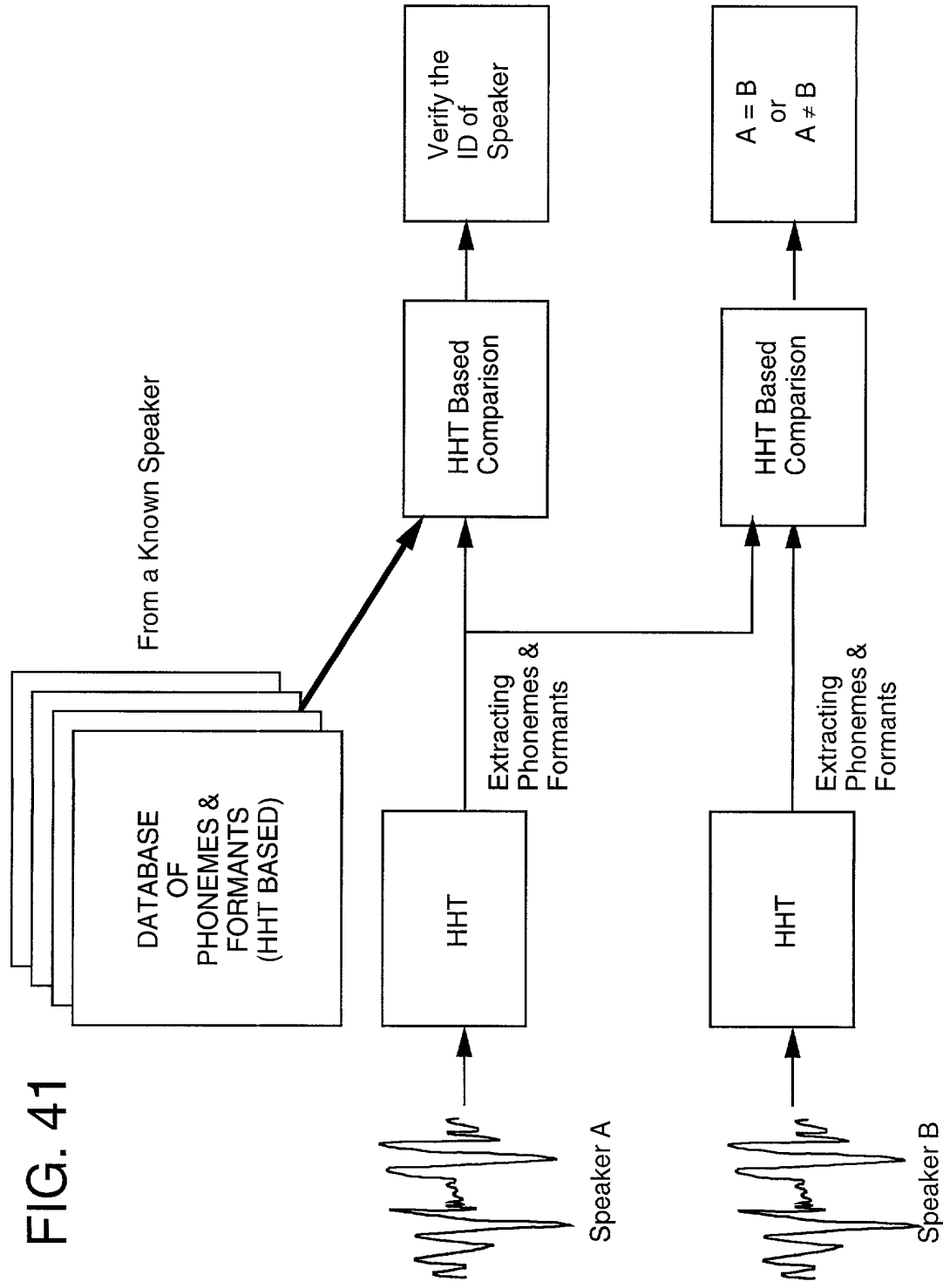
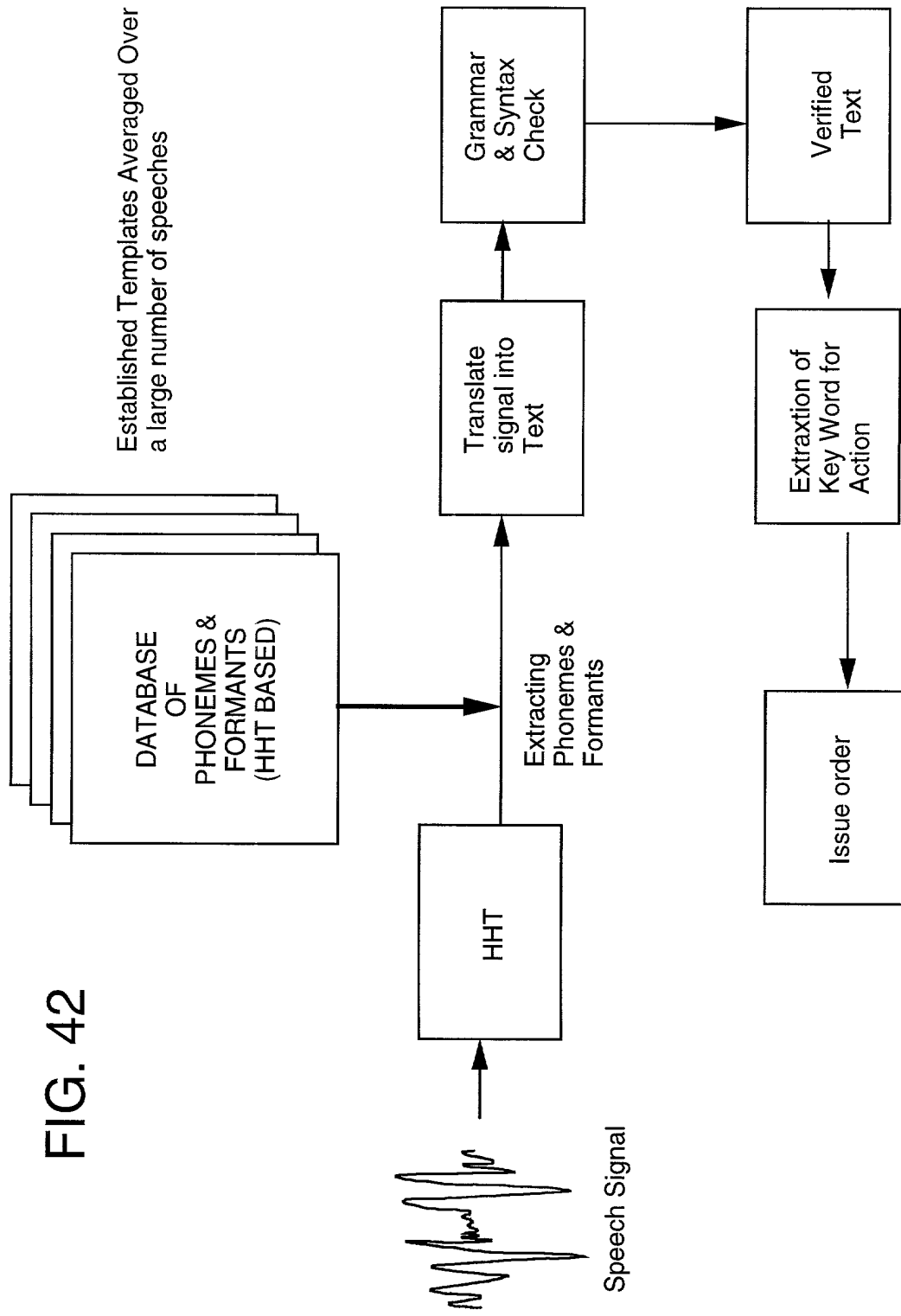


FIG. 42



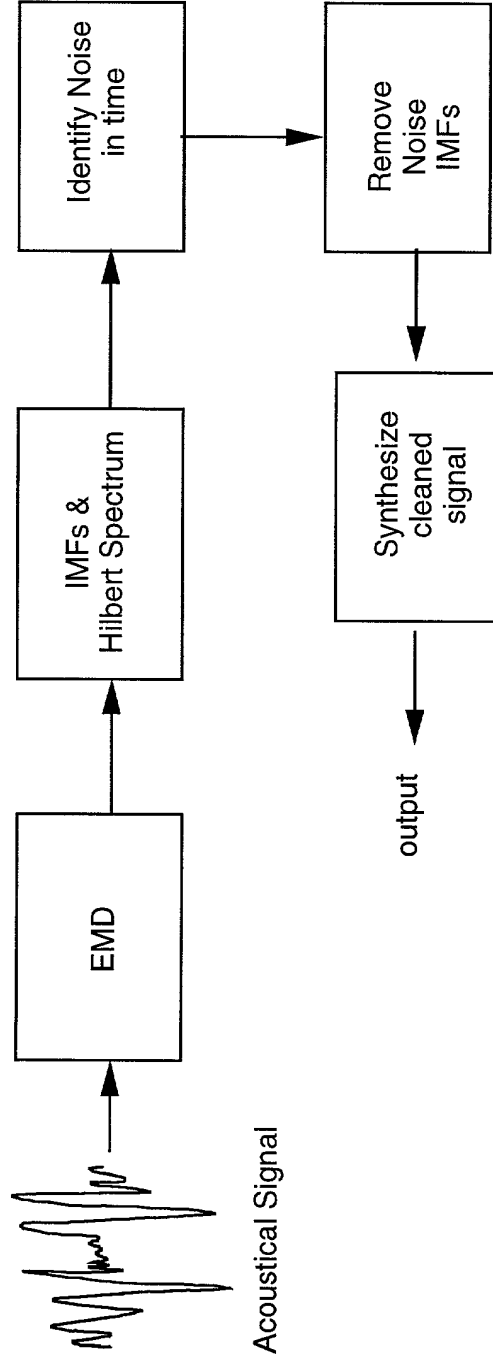


FIG. 43

any other data from the system, the system may be able to detect the presence of a fault.

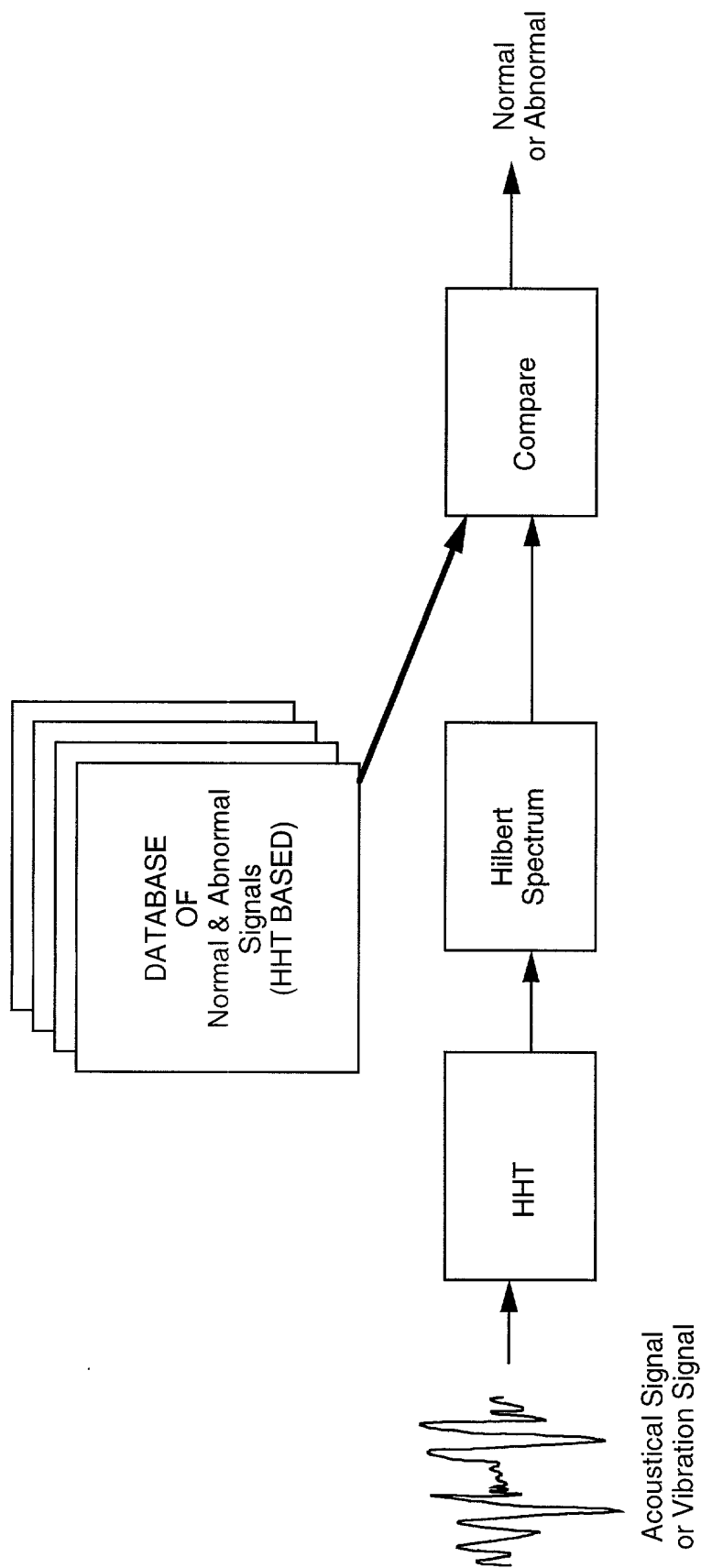


FIG. 44

FIG. 45(a)

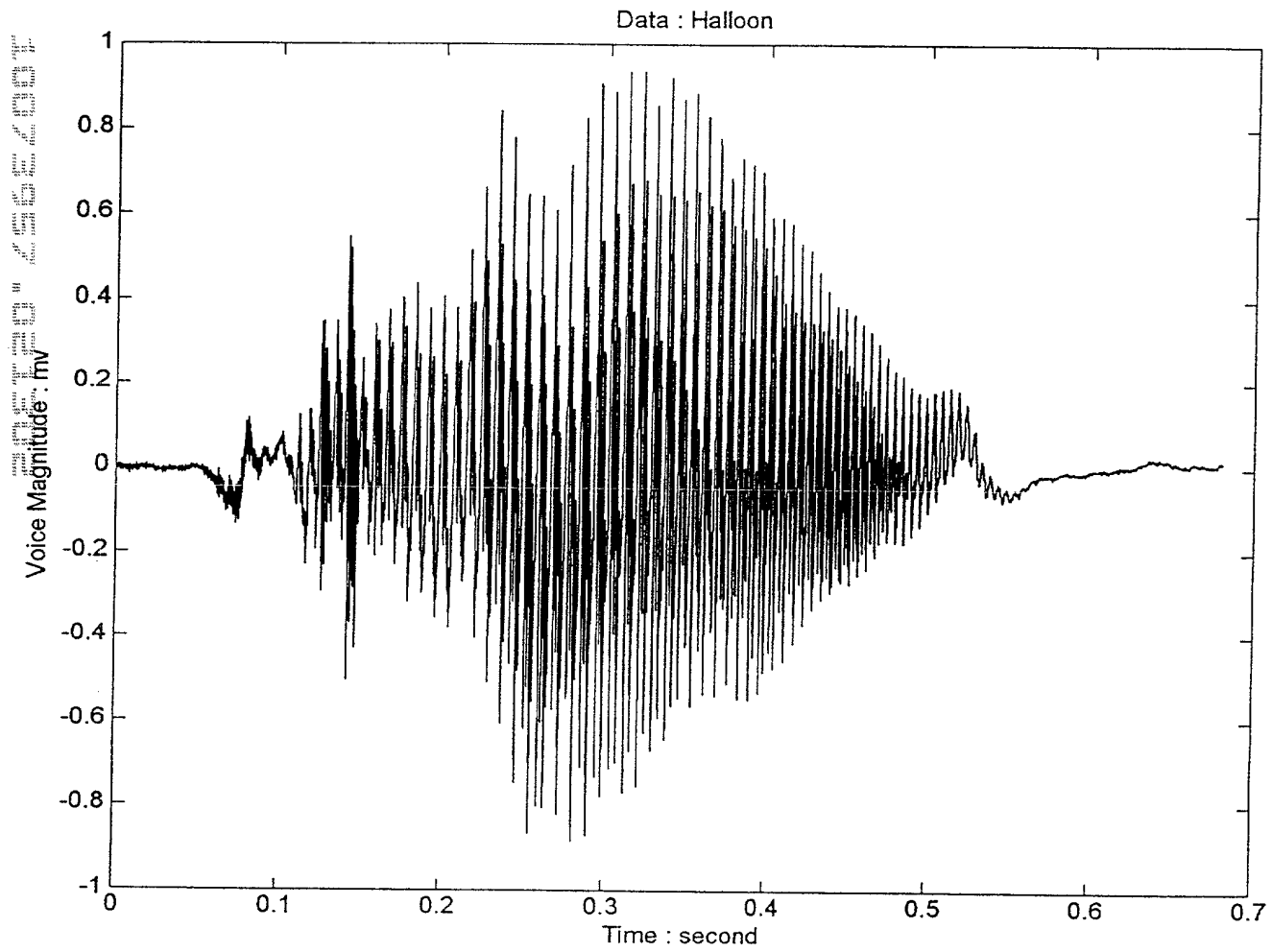


FIG. 45(b)

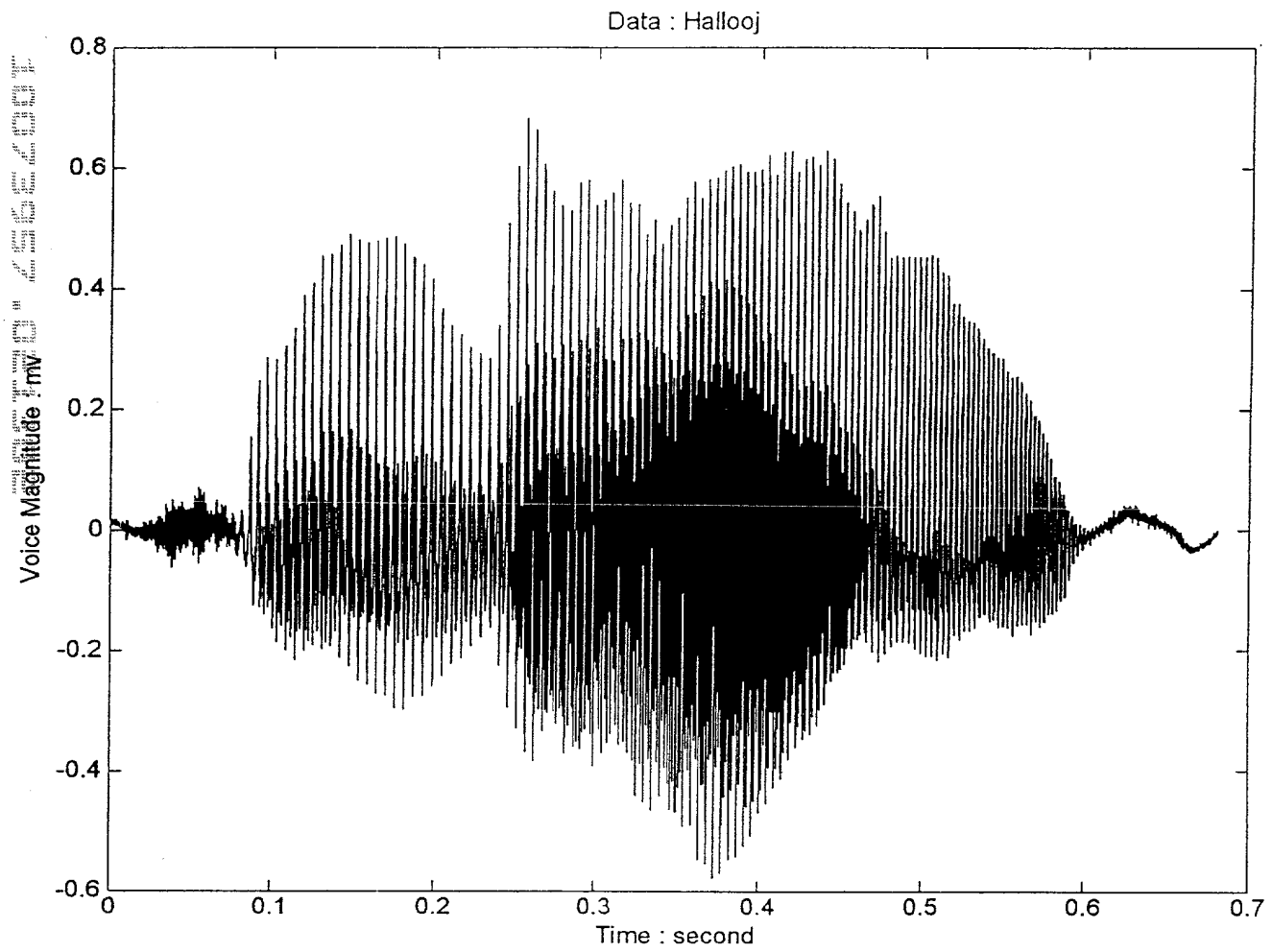


FIG. 46(a)

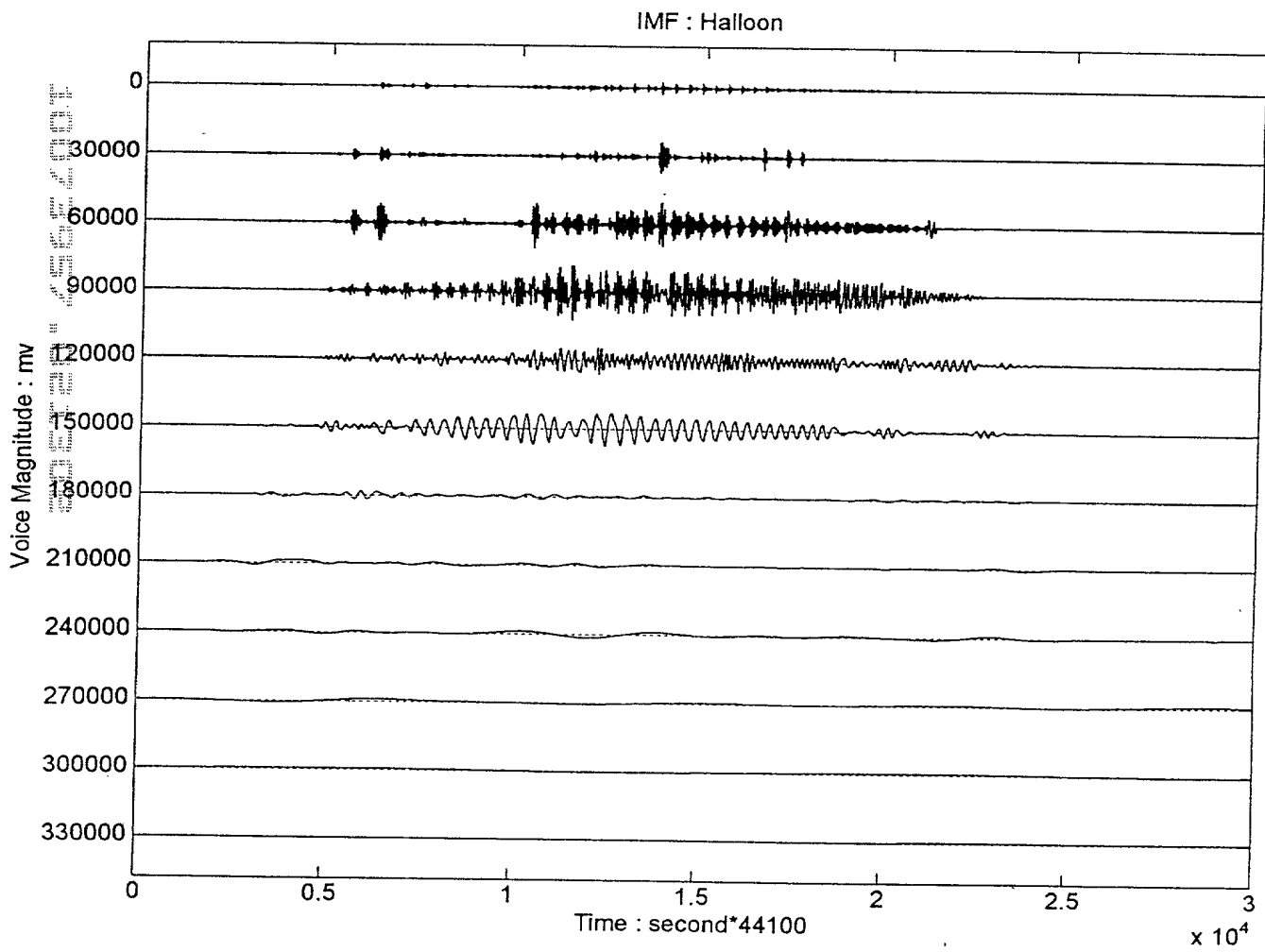


FIG. 46(b)

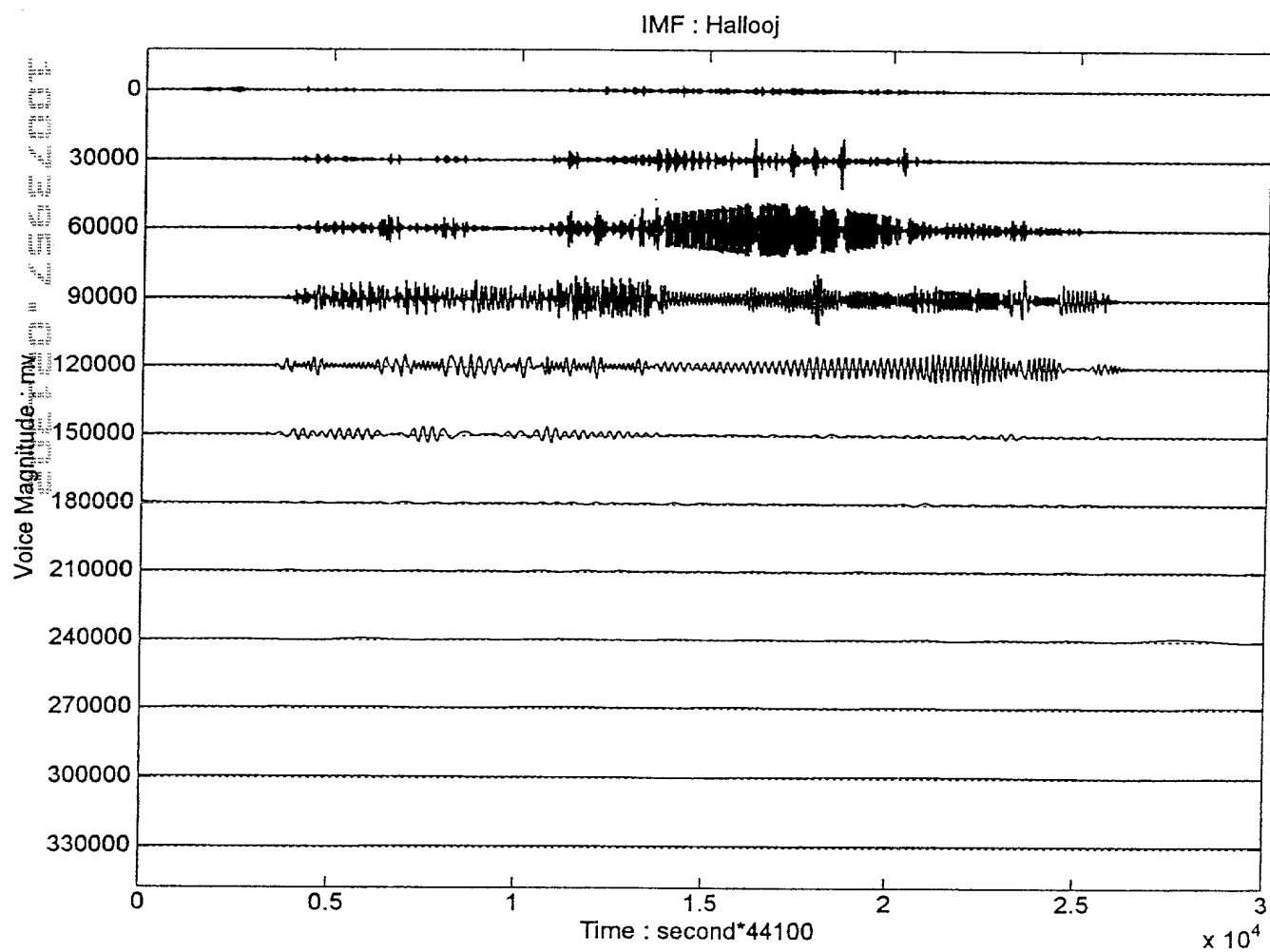


FIG. 47(a)

Hilbert Spectrum : Halloon

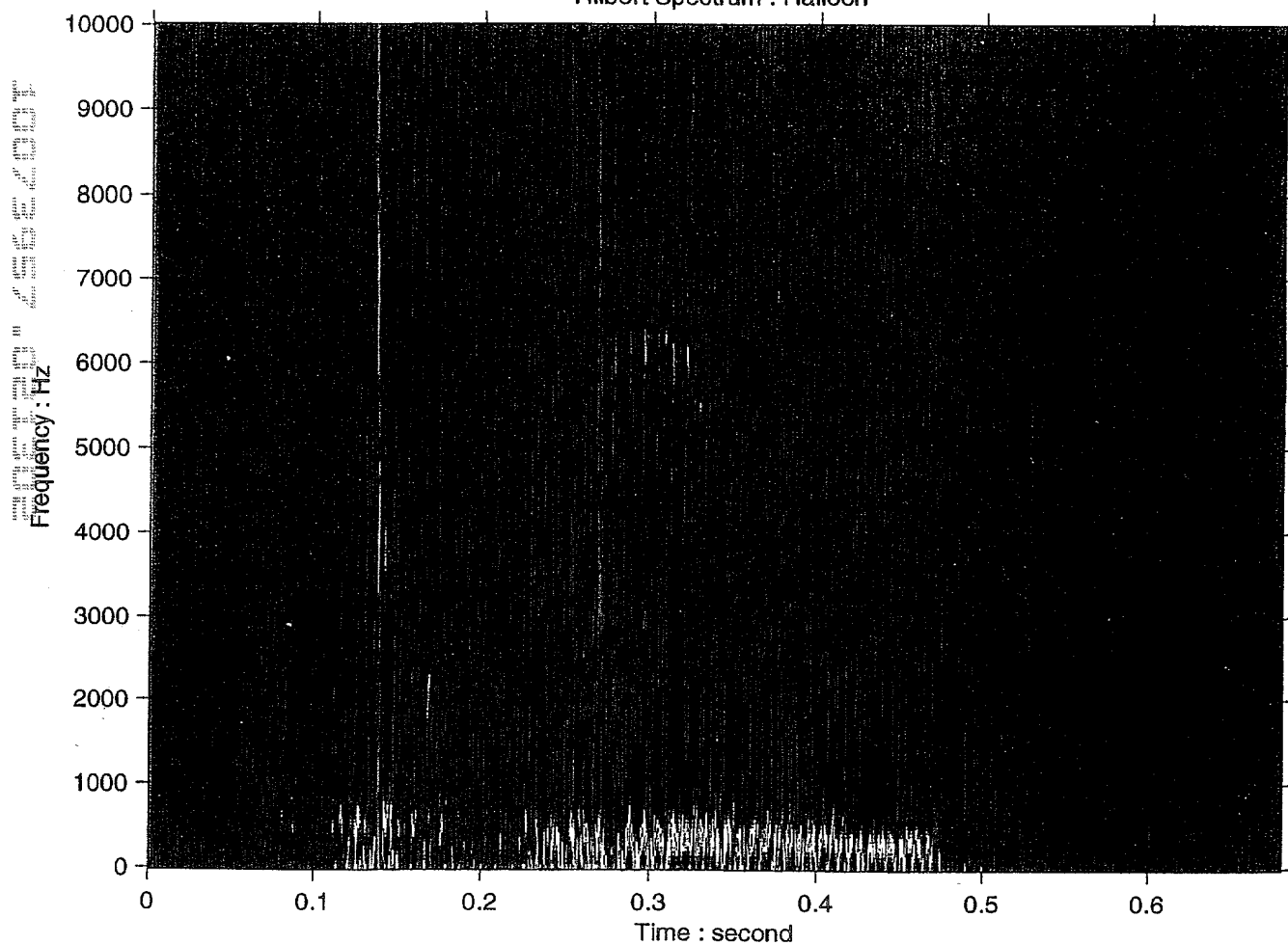


FIG. 47(b)

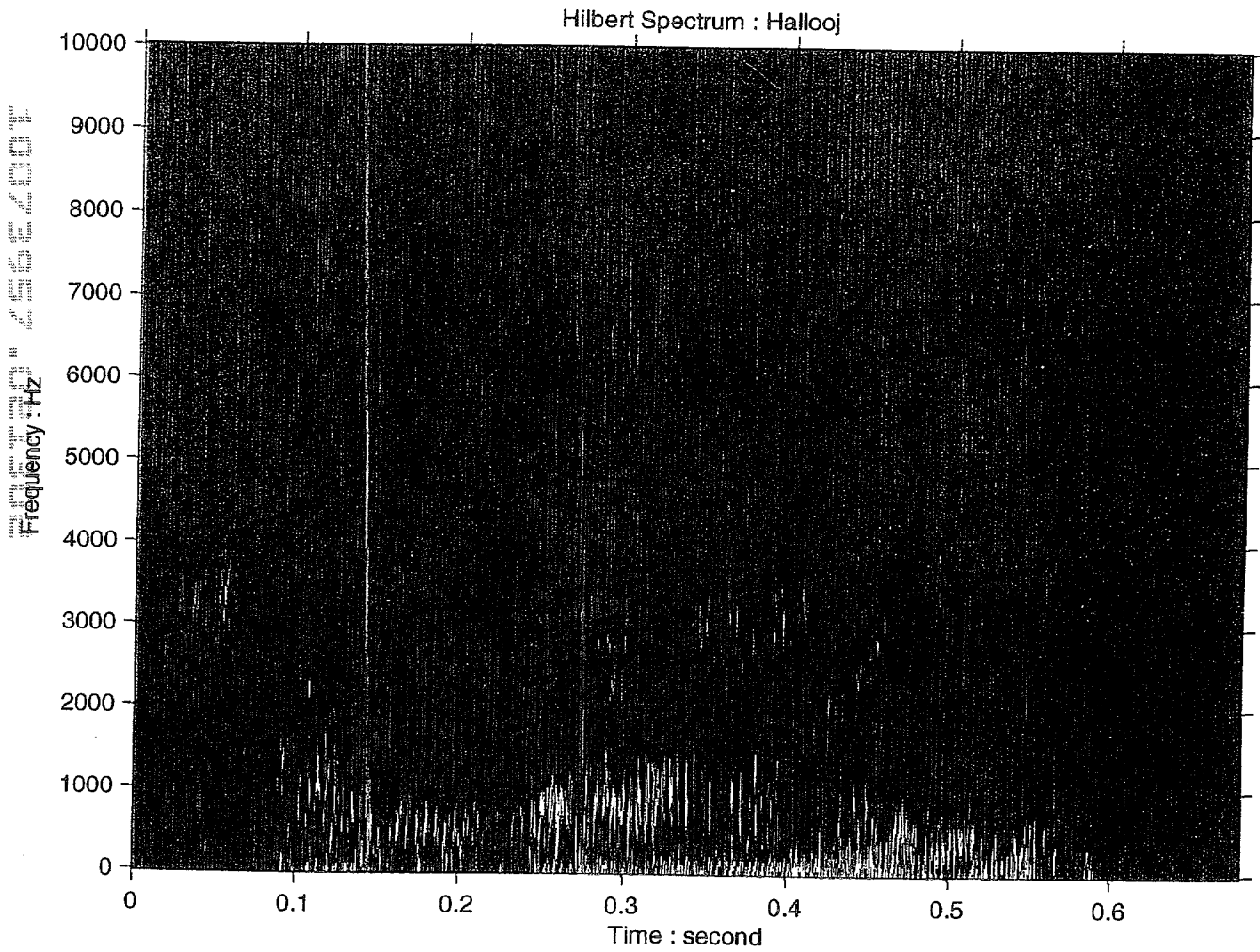


FIG. 48(a)

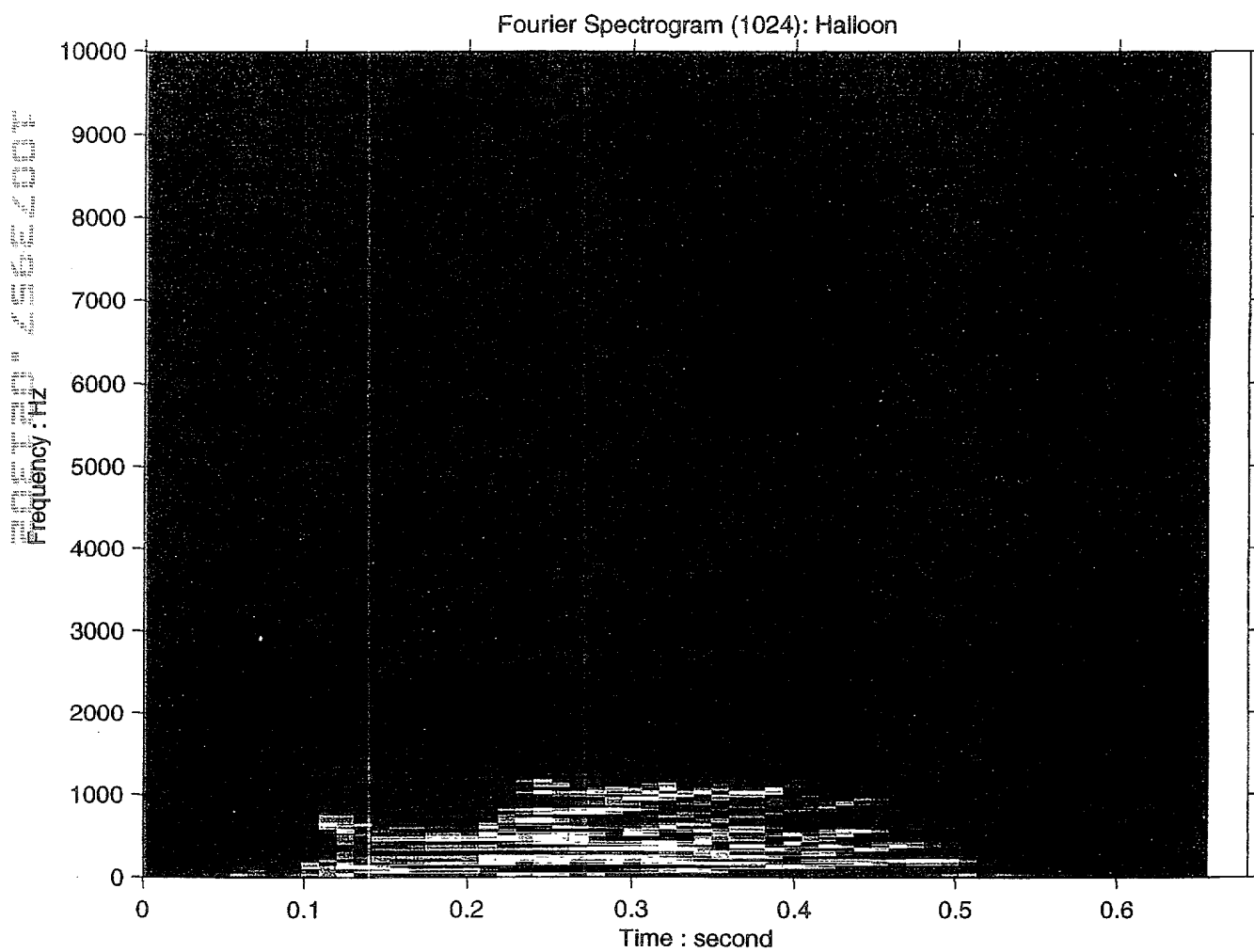


FIG. 48(b)

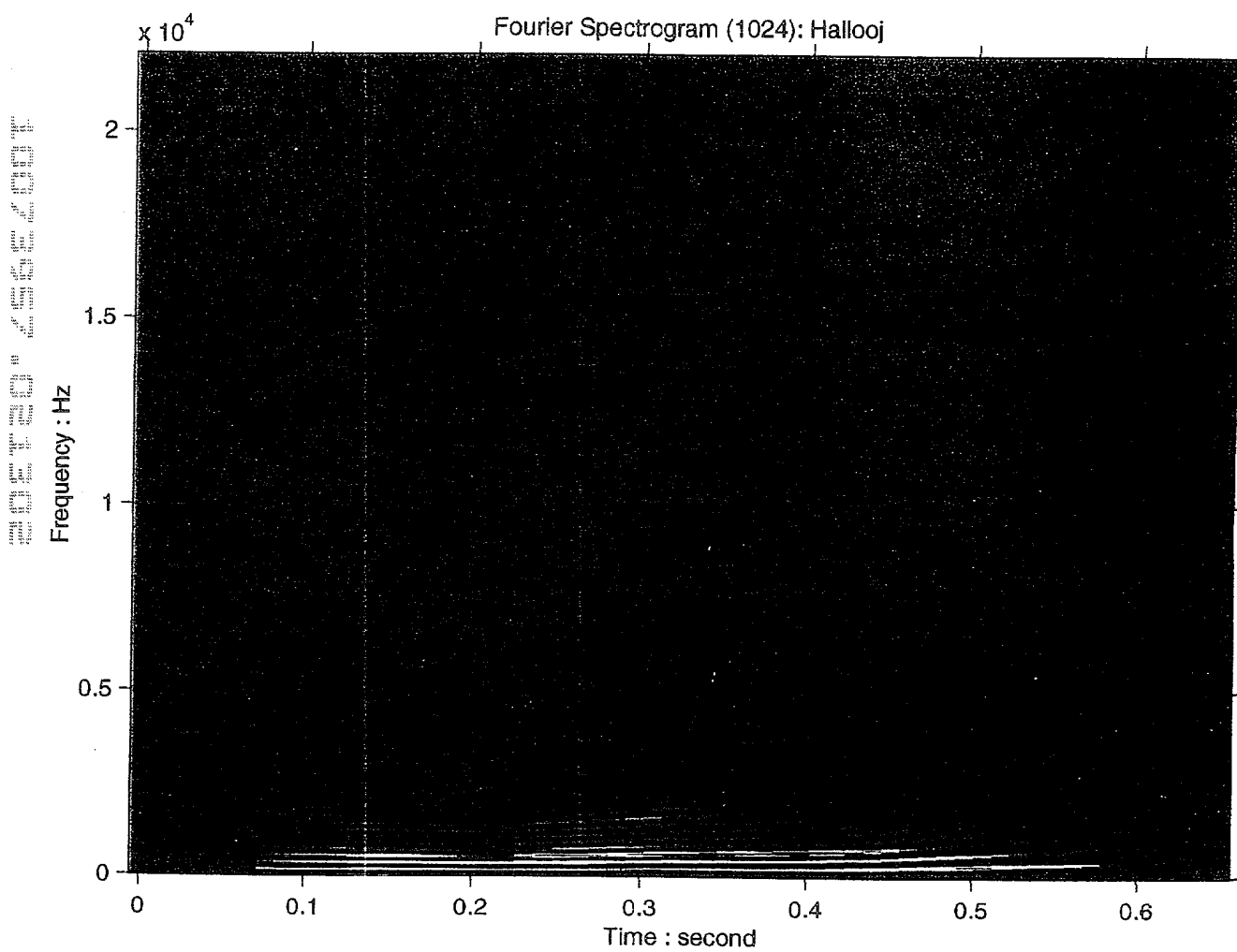


FIG. 49(a)

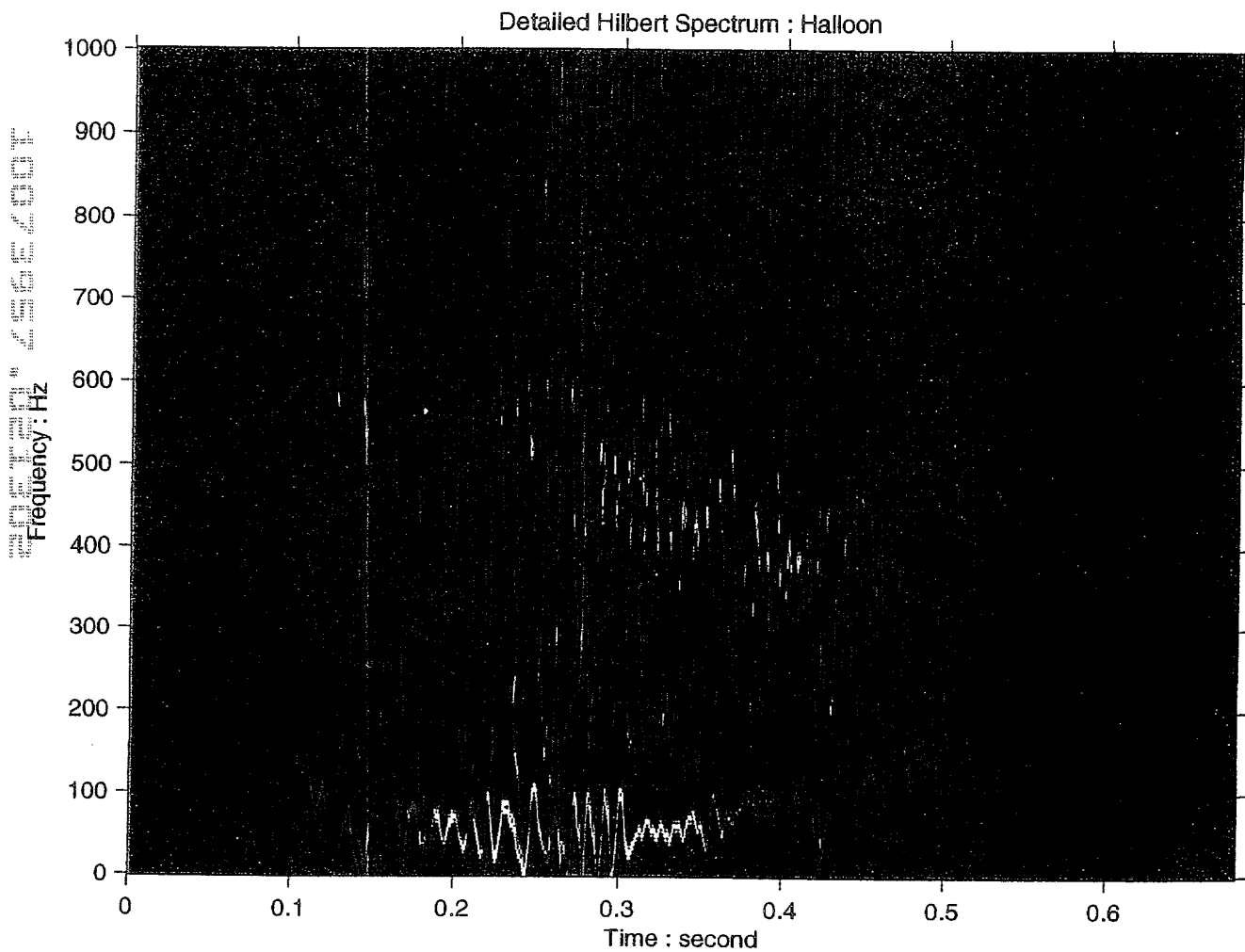


FIG. 49(b)

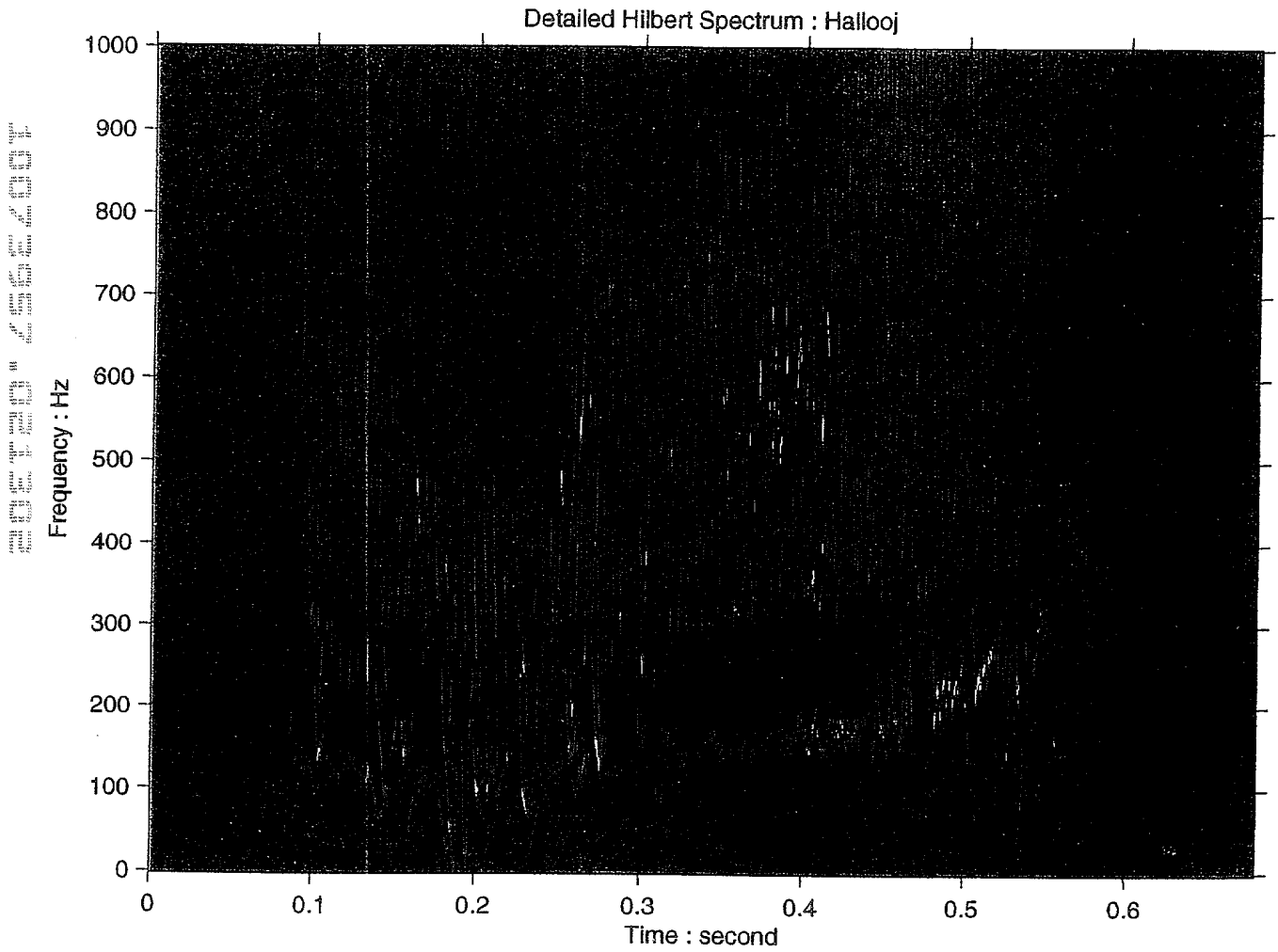


FIG. 50

Fourier Spectrogram (128) : Halloon

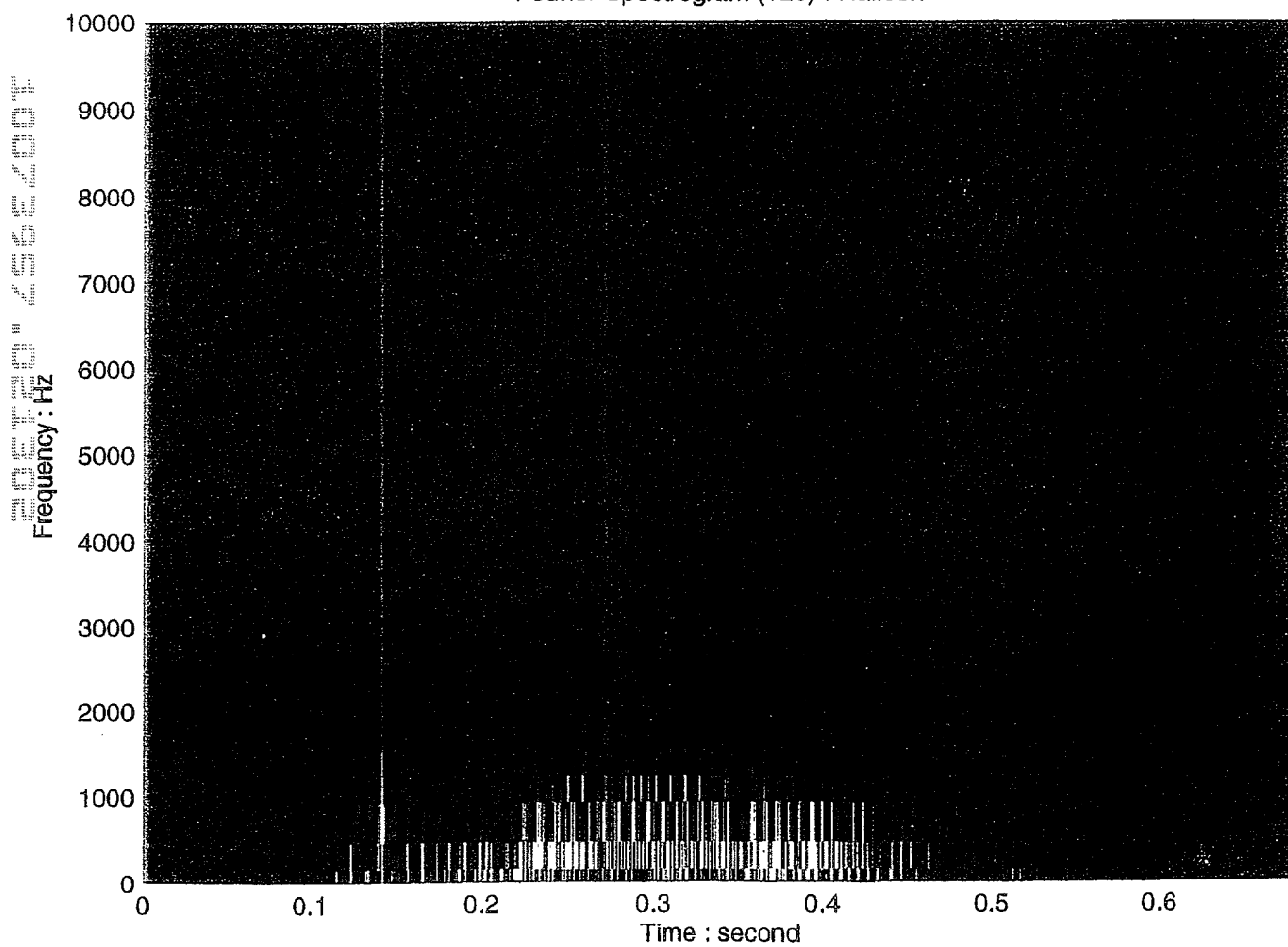


FIG. 51(a)

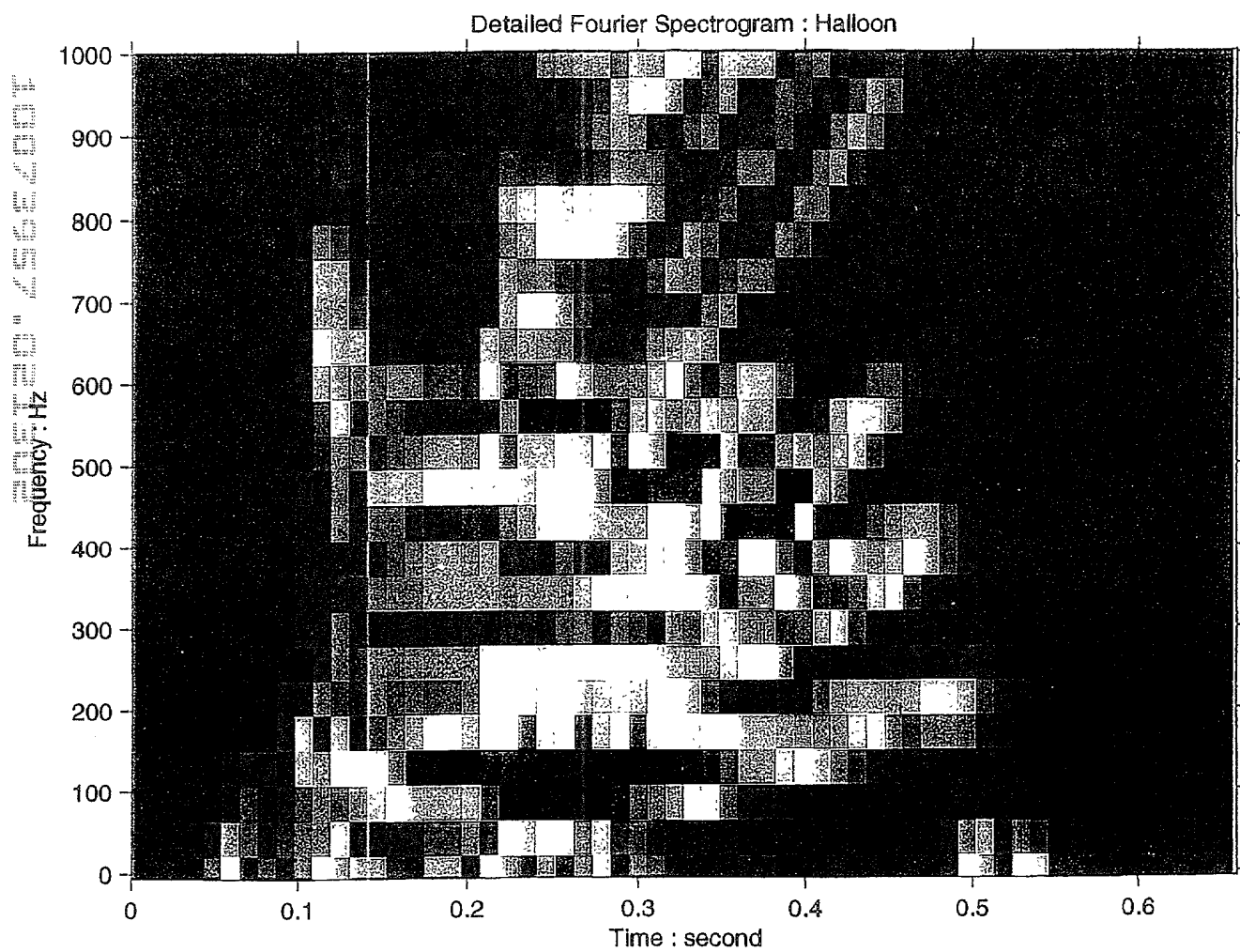


FIG. 51(b)

Detailed Fourier Spectrogram (128) : Halloon

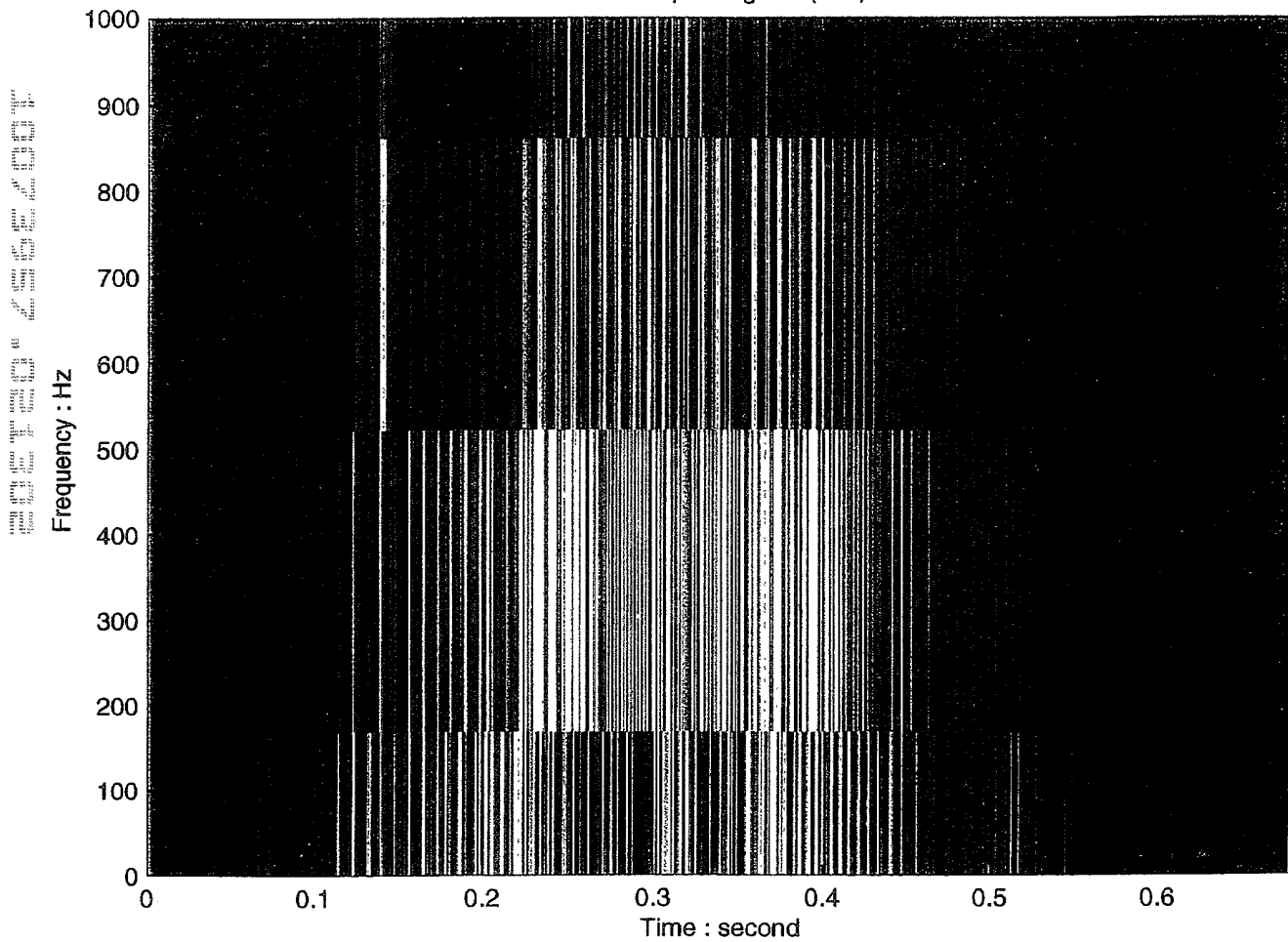


FIG. 52(a)

Detailed Morlet Wavelet Spectrum : Halloon

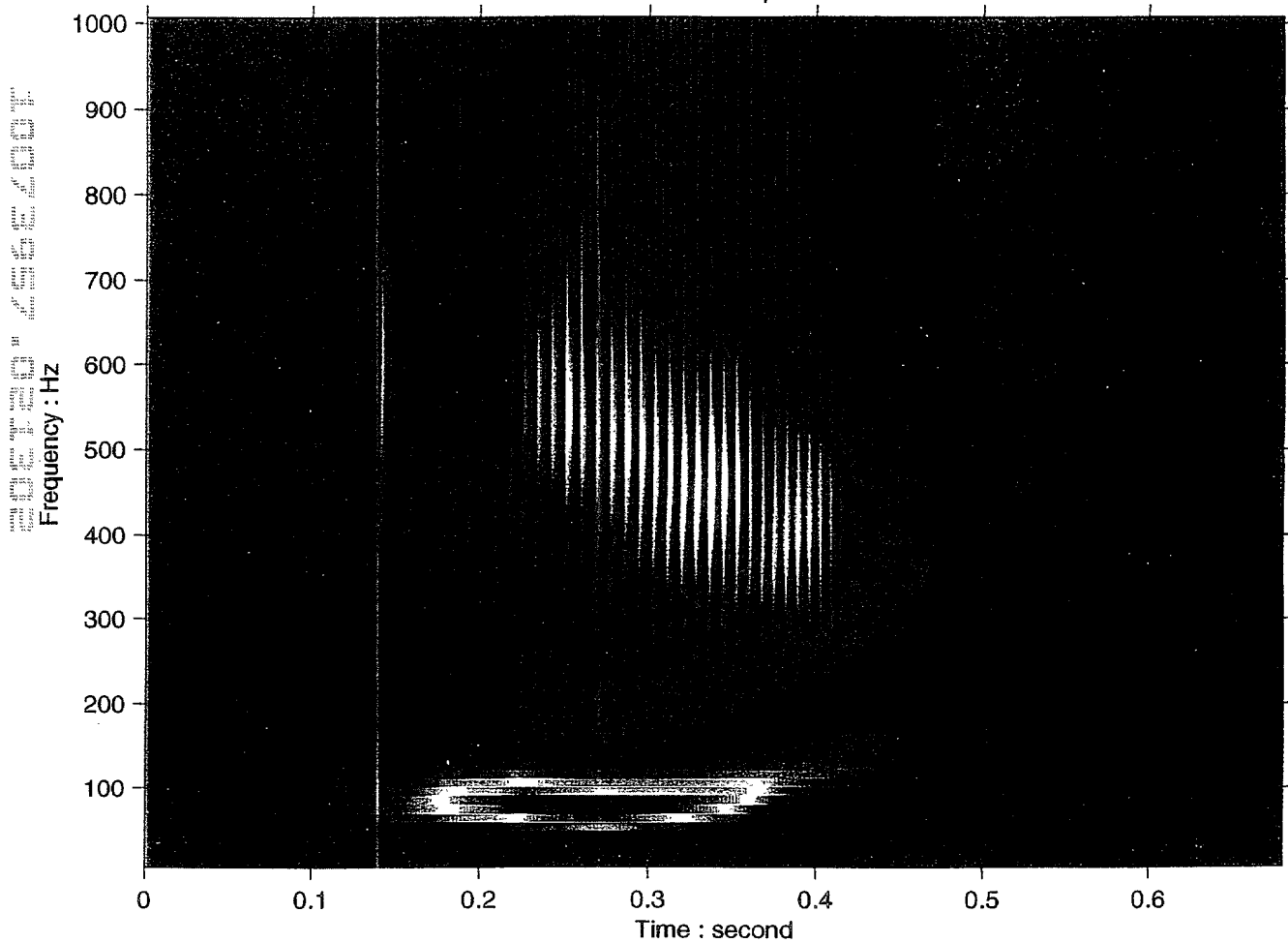


FIG. 52(b)

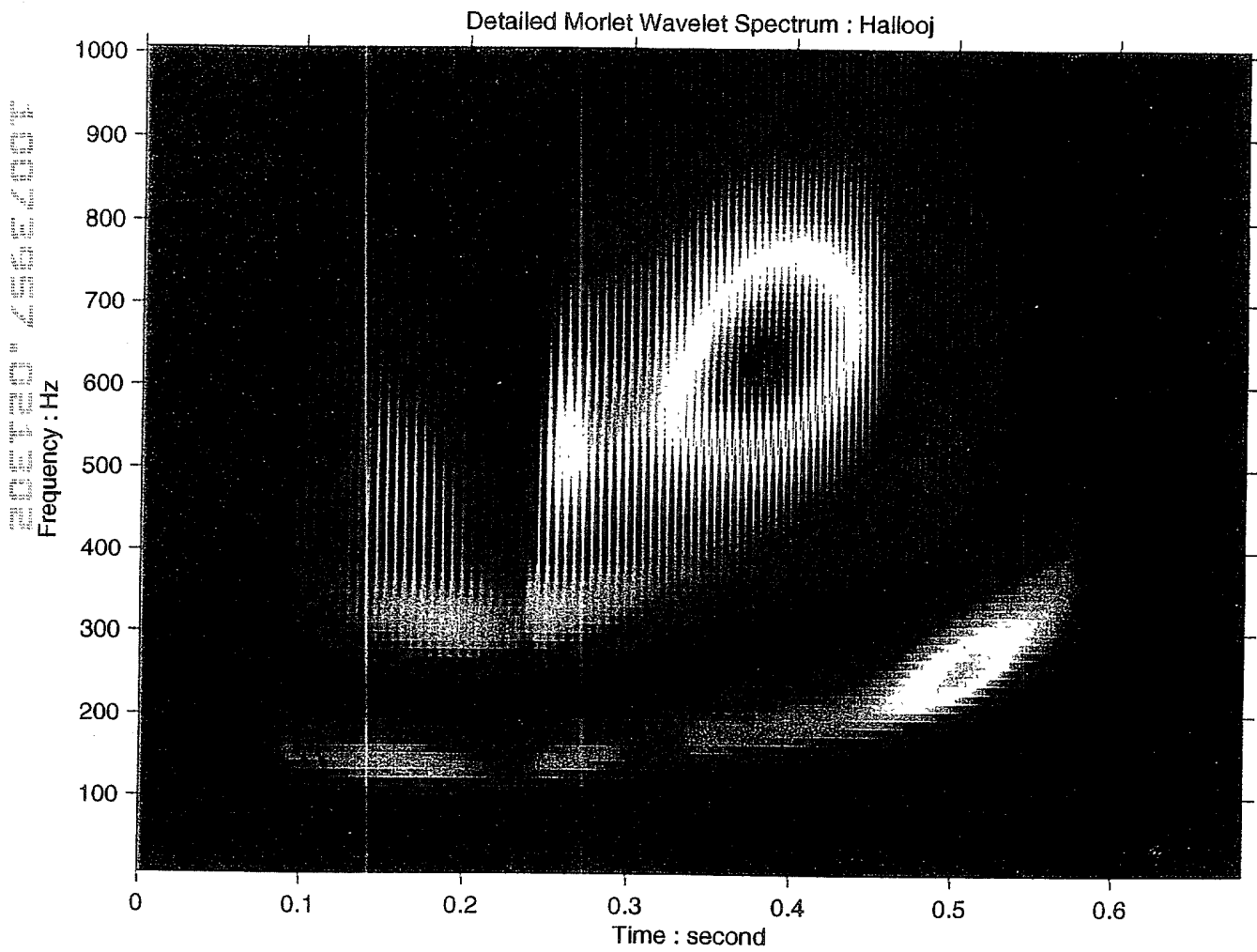


FIG. 53(a)

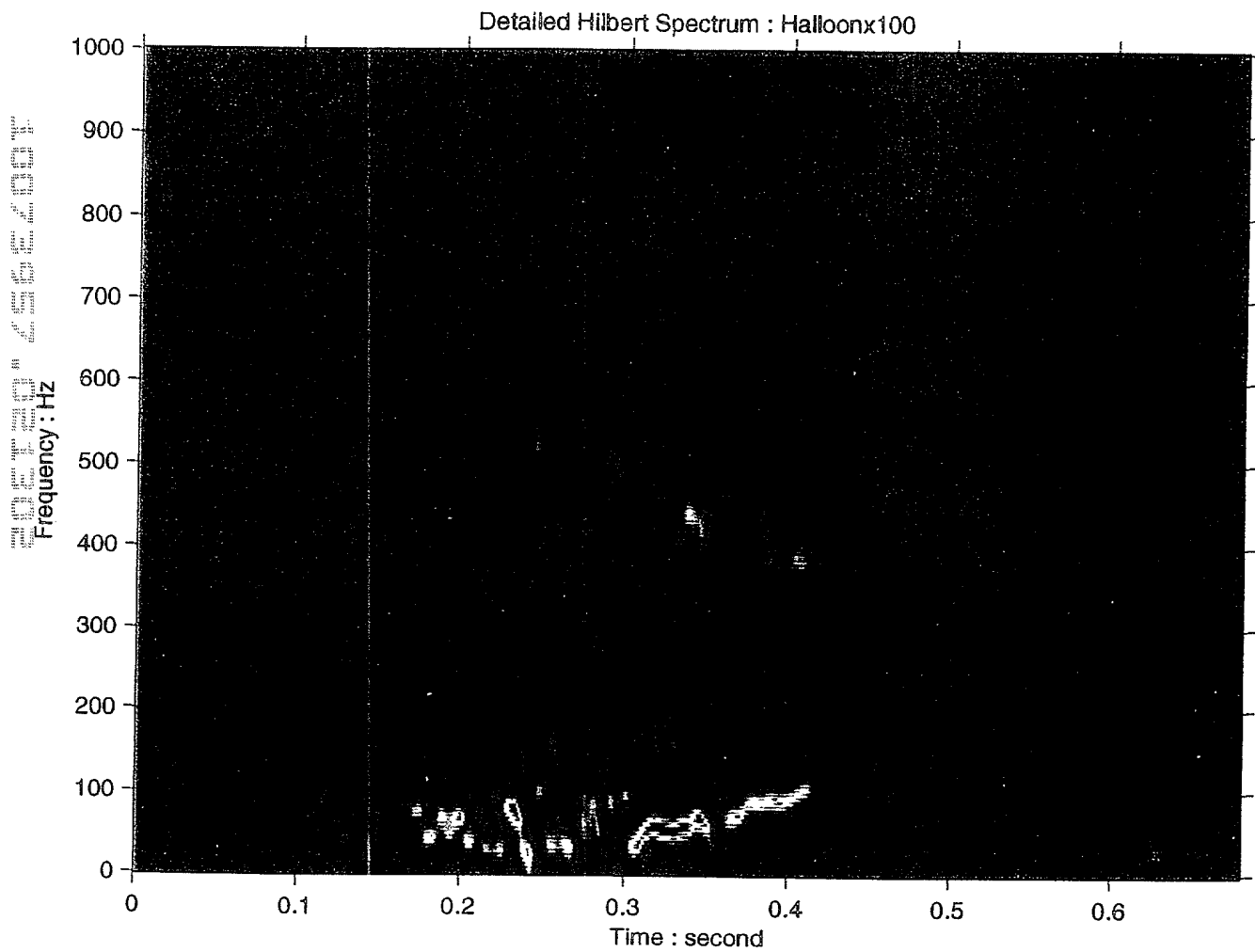


FIG. 53(b)

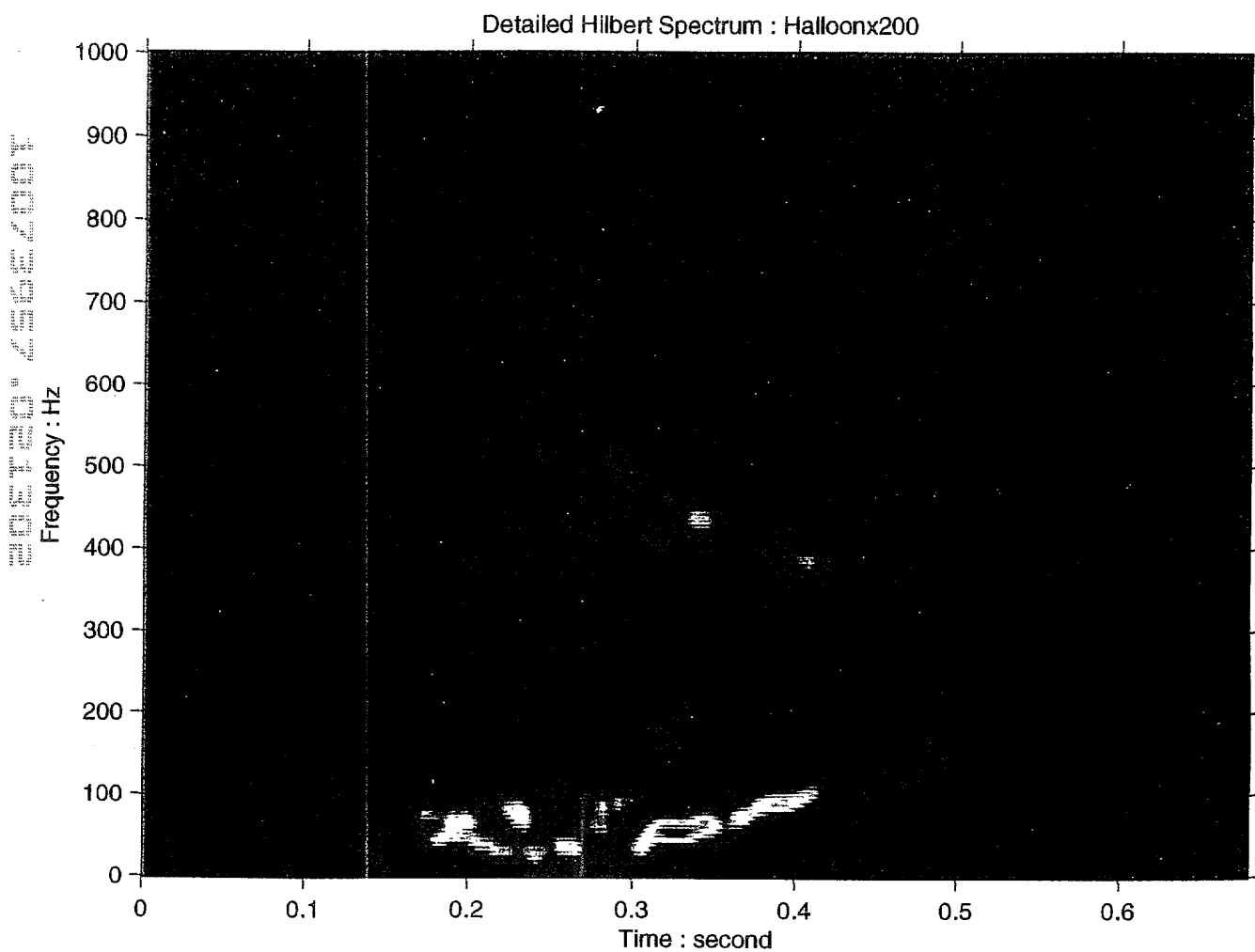


FIG. 54(a)

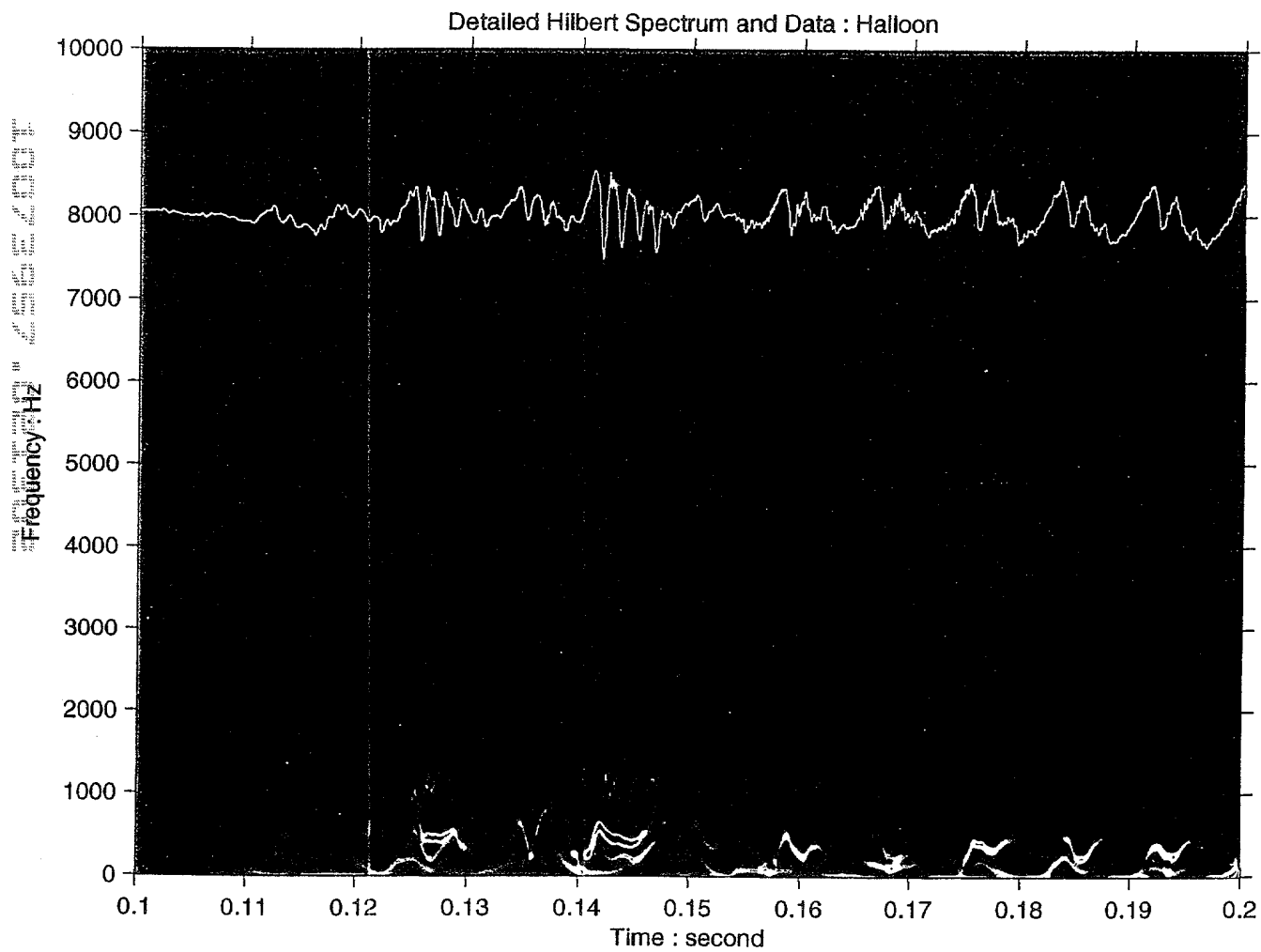


FIG. 54(b)

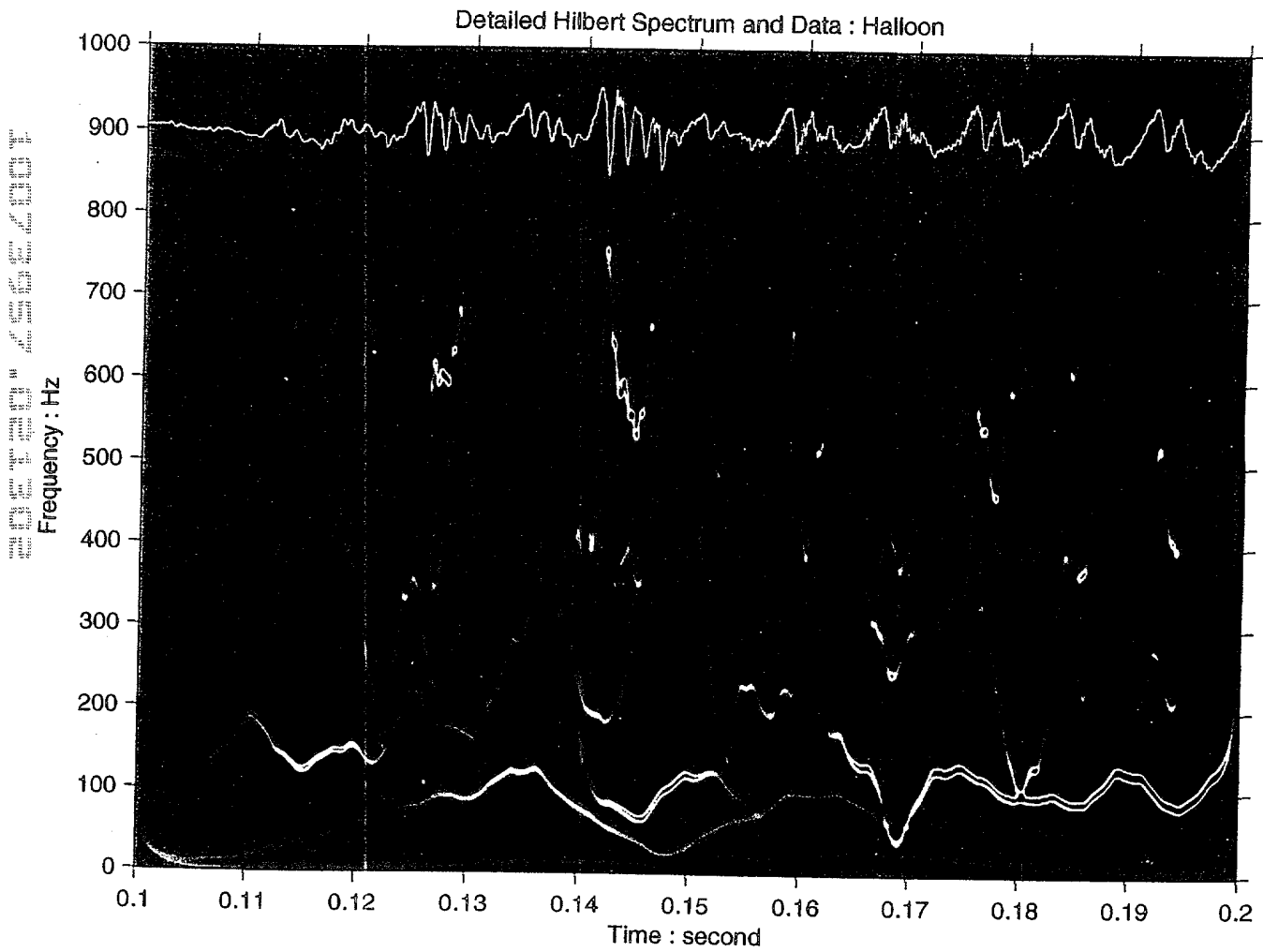


FIG. 55

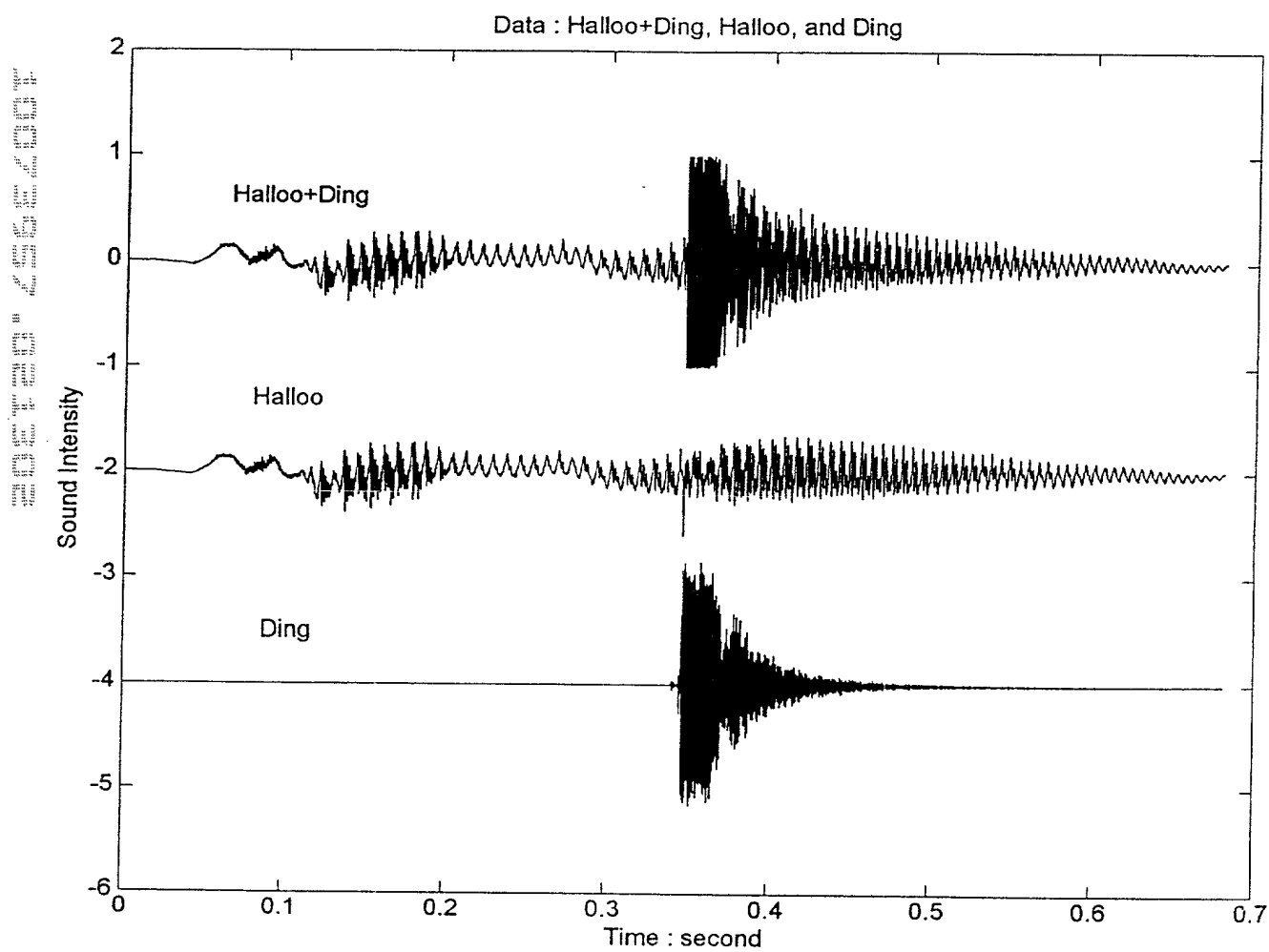


FIG. 56(a)

IMF : Halloo & Ding

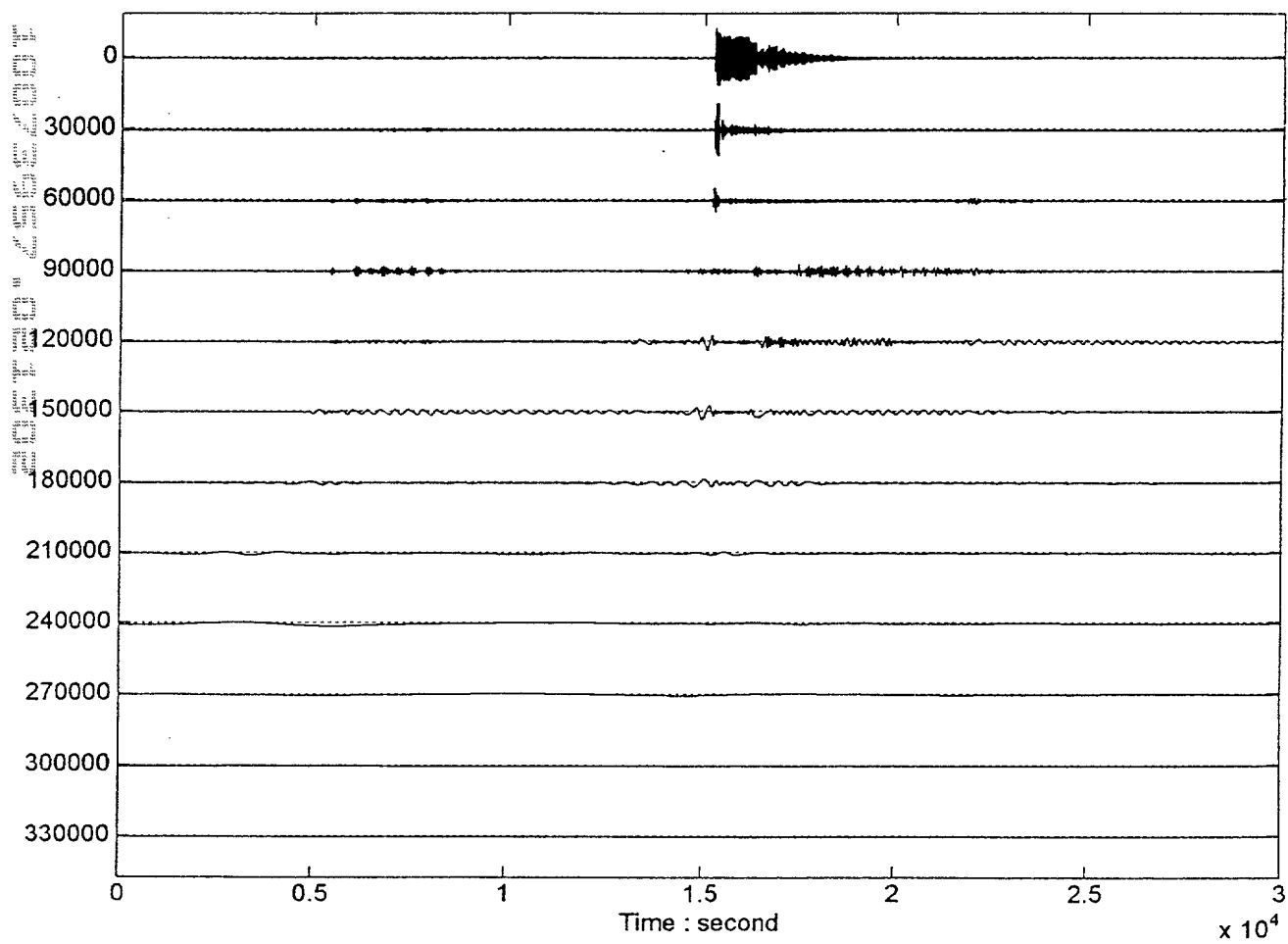


FIG. 56(b)

IMF : Halloo & Ding

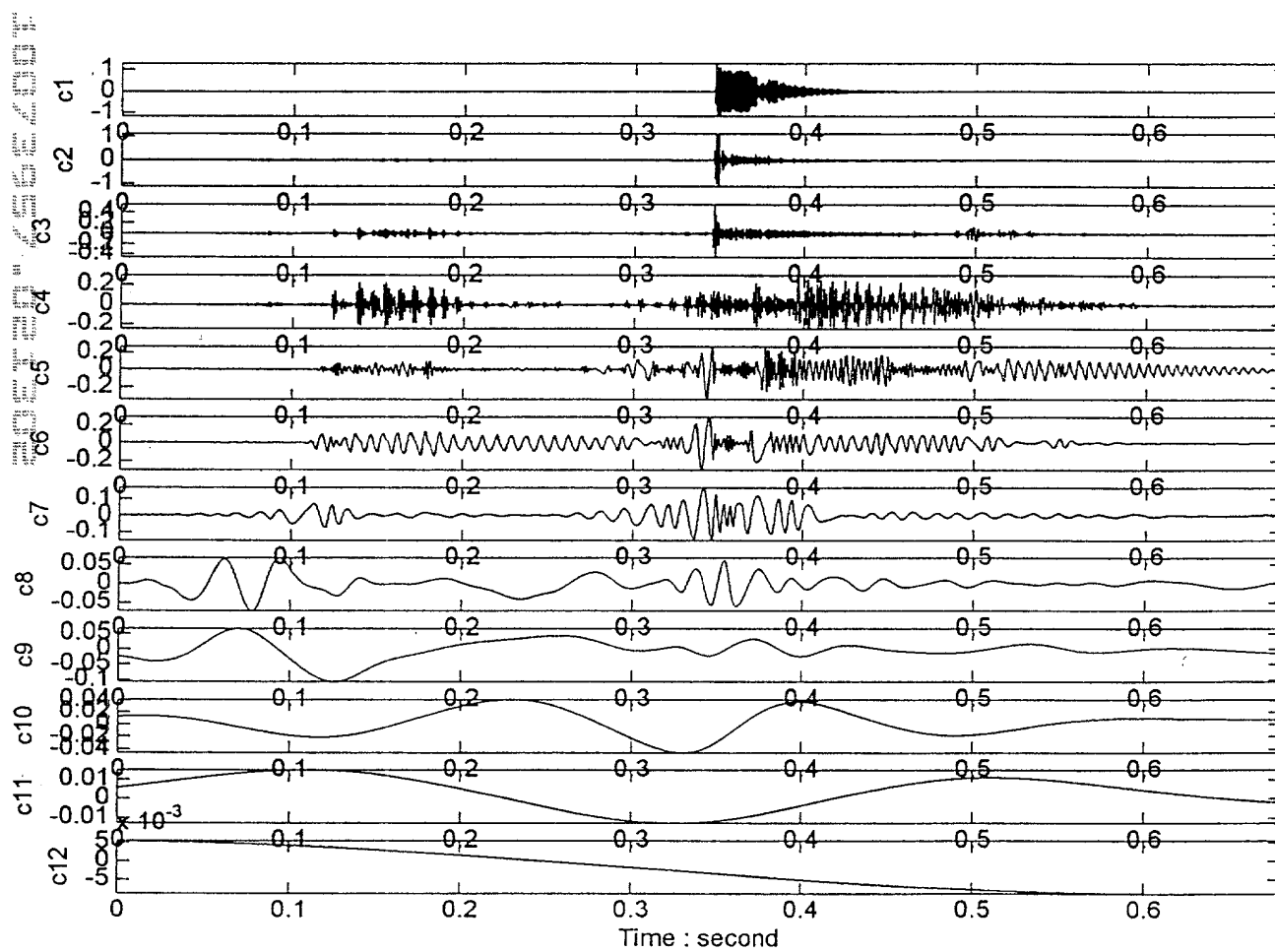


FIG. 57(a)

IMF : Filtered Halloo & Ding

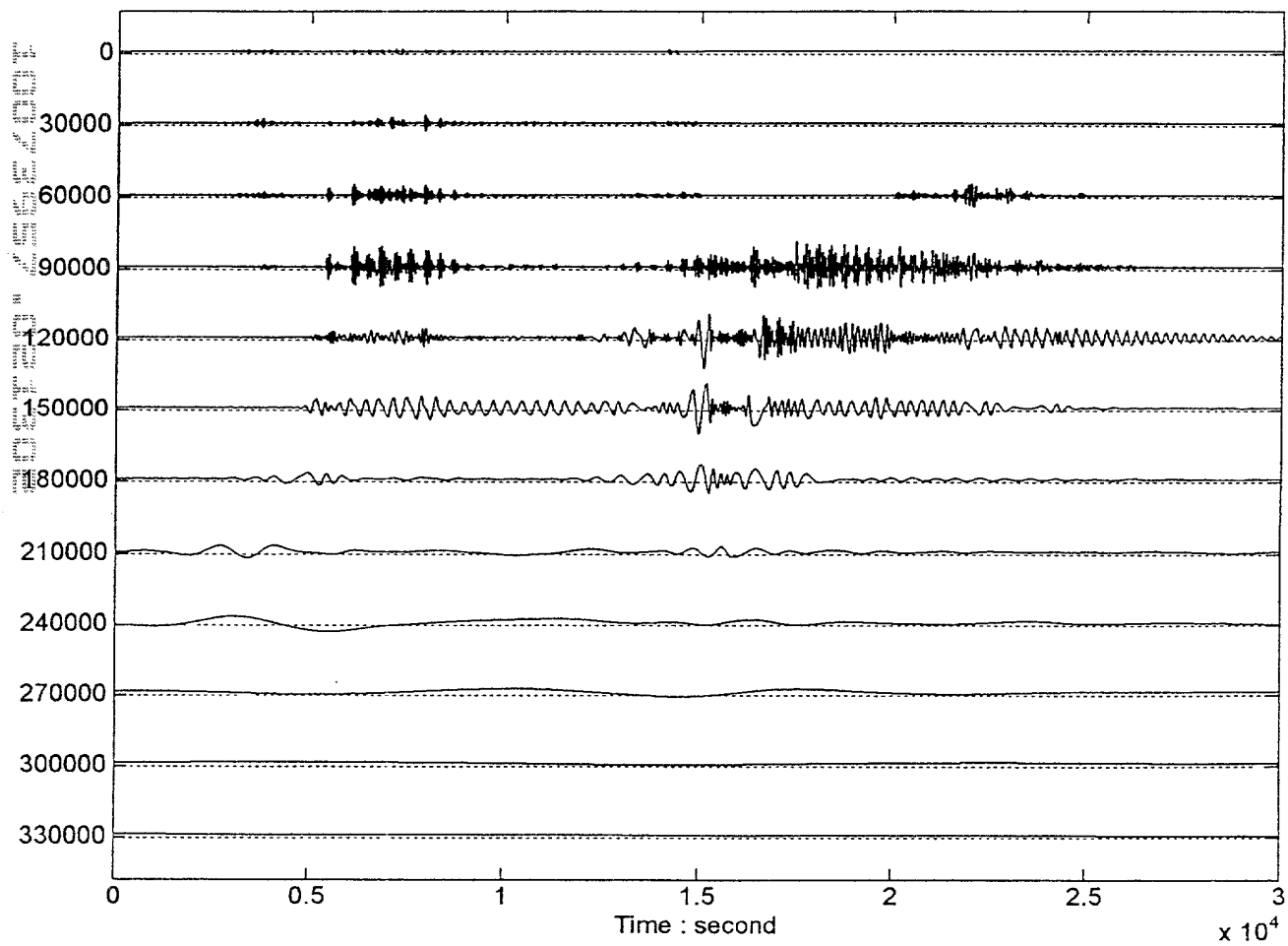


FIG. 57(b)

IMF : Ding

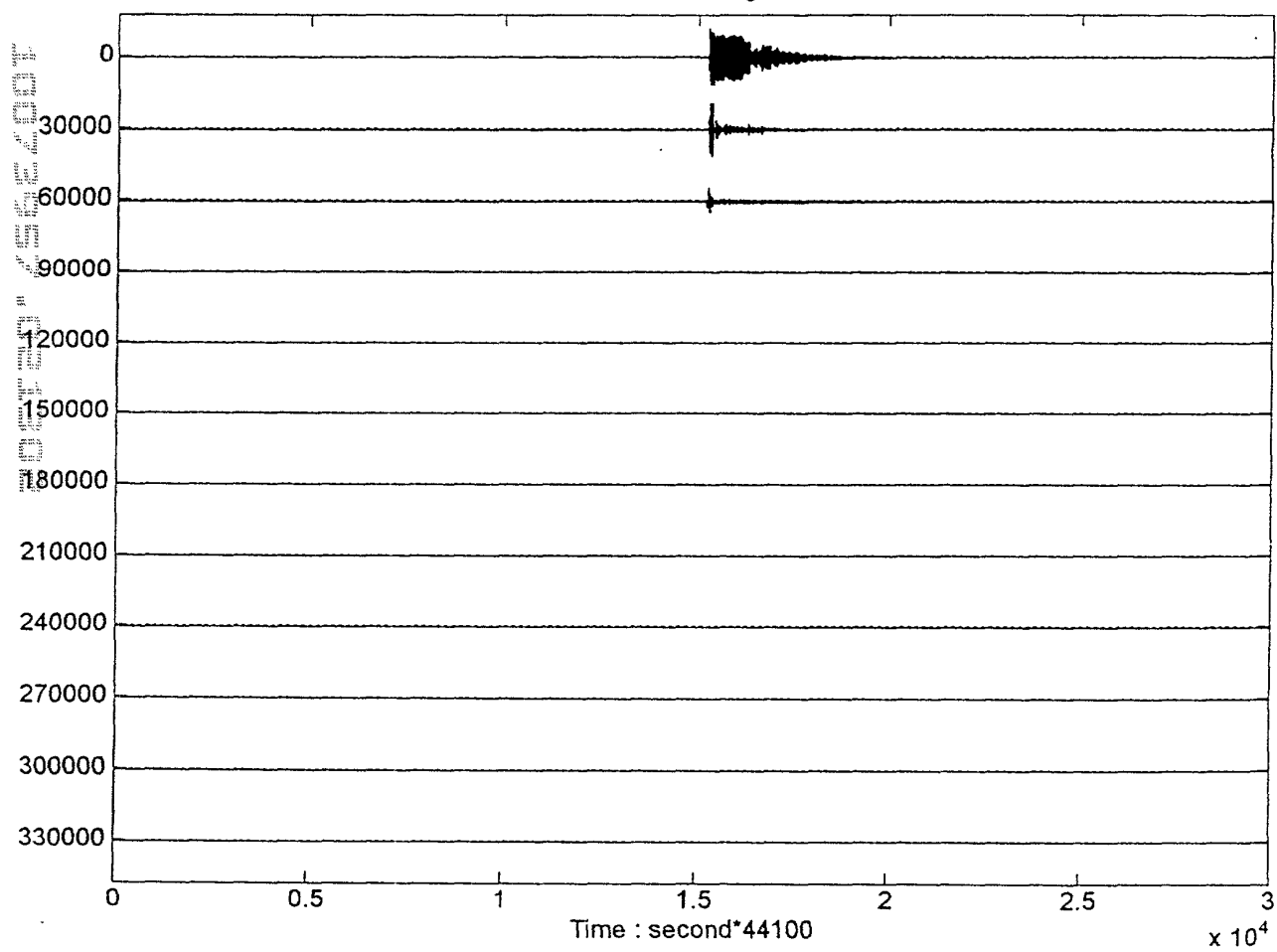


FIG. 58(a)

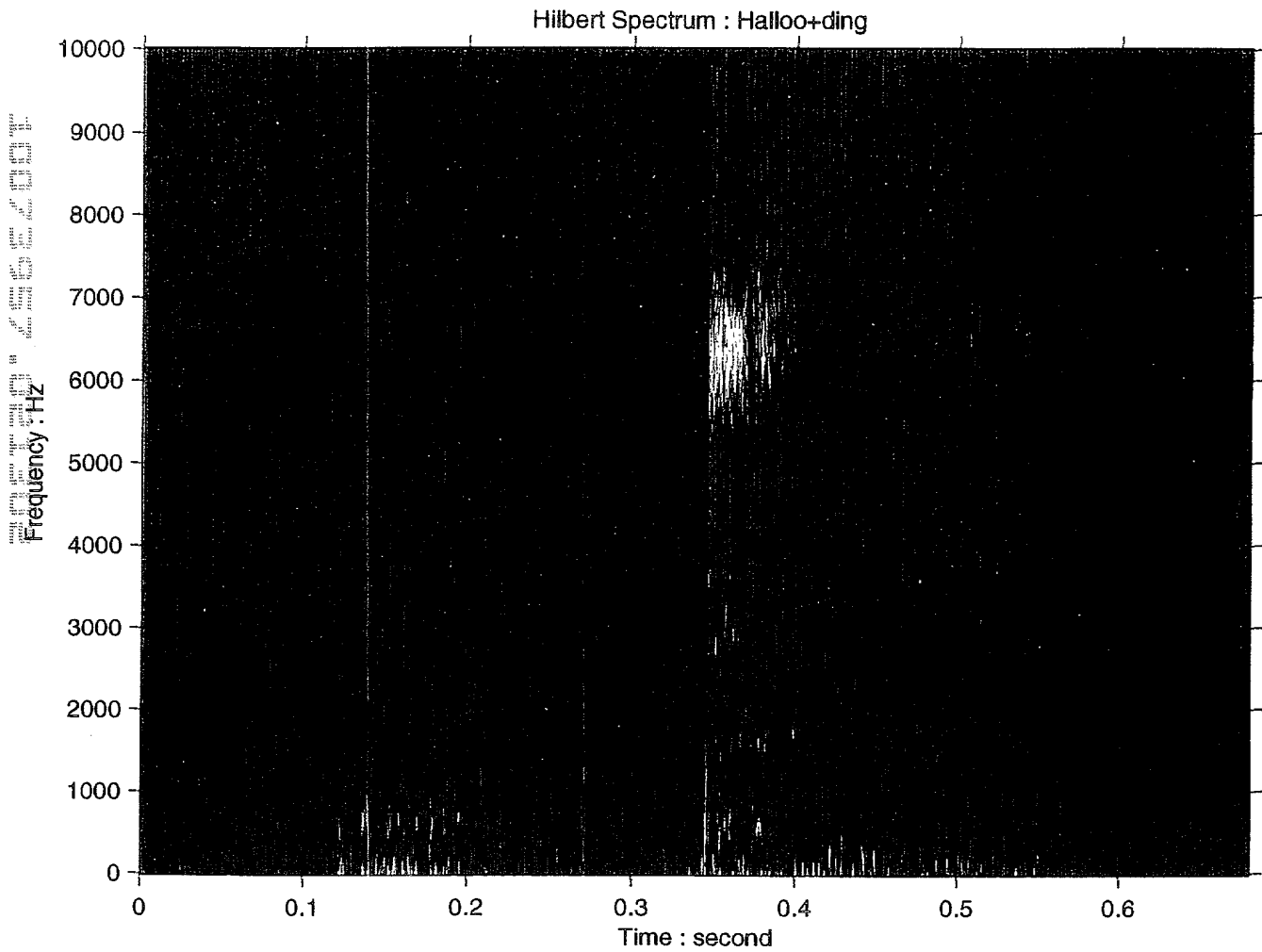


FIG. 58(b)

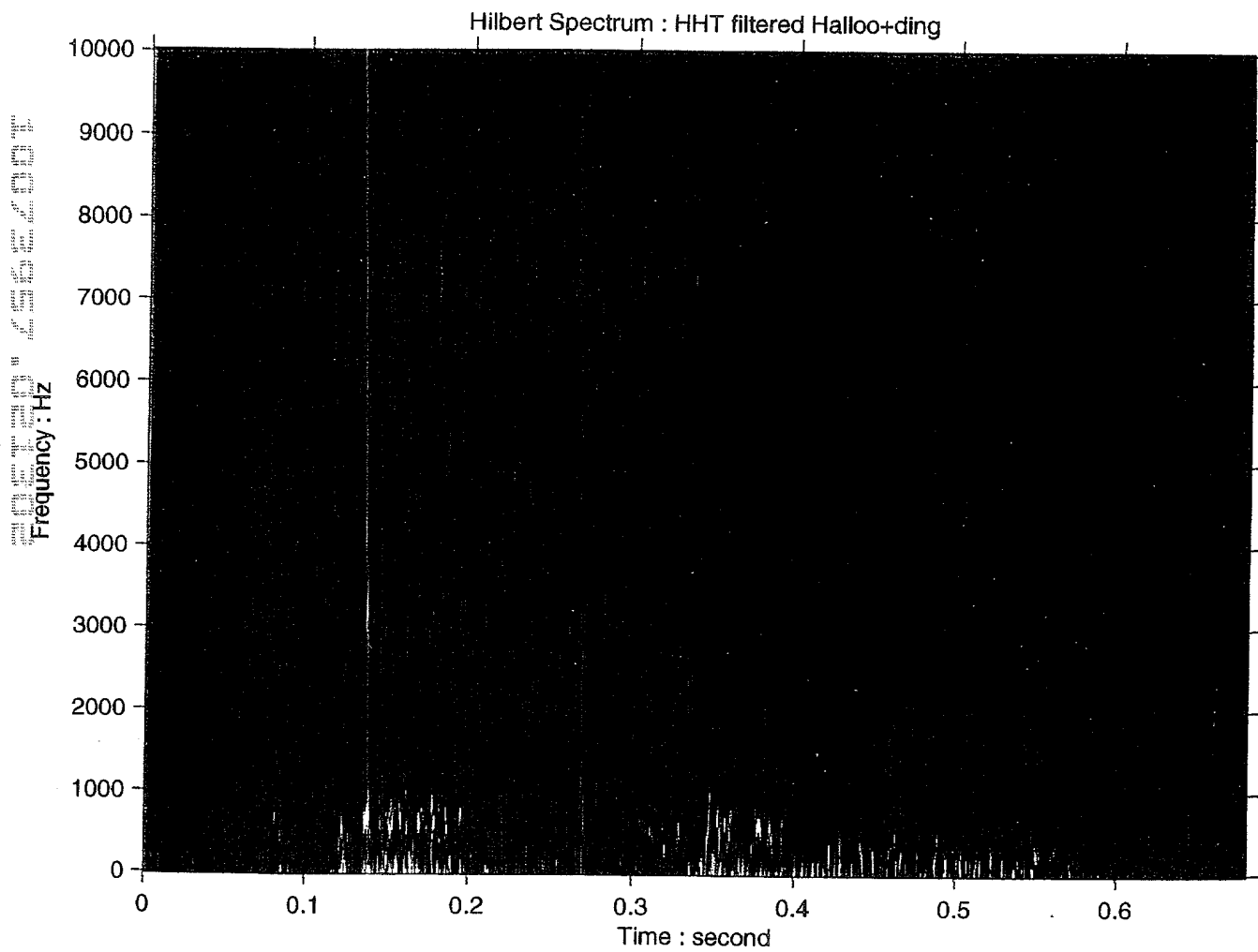


FIG. 59(a)

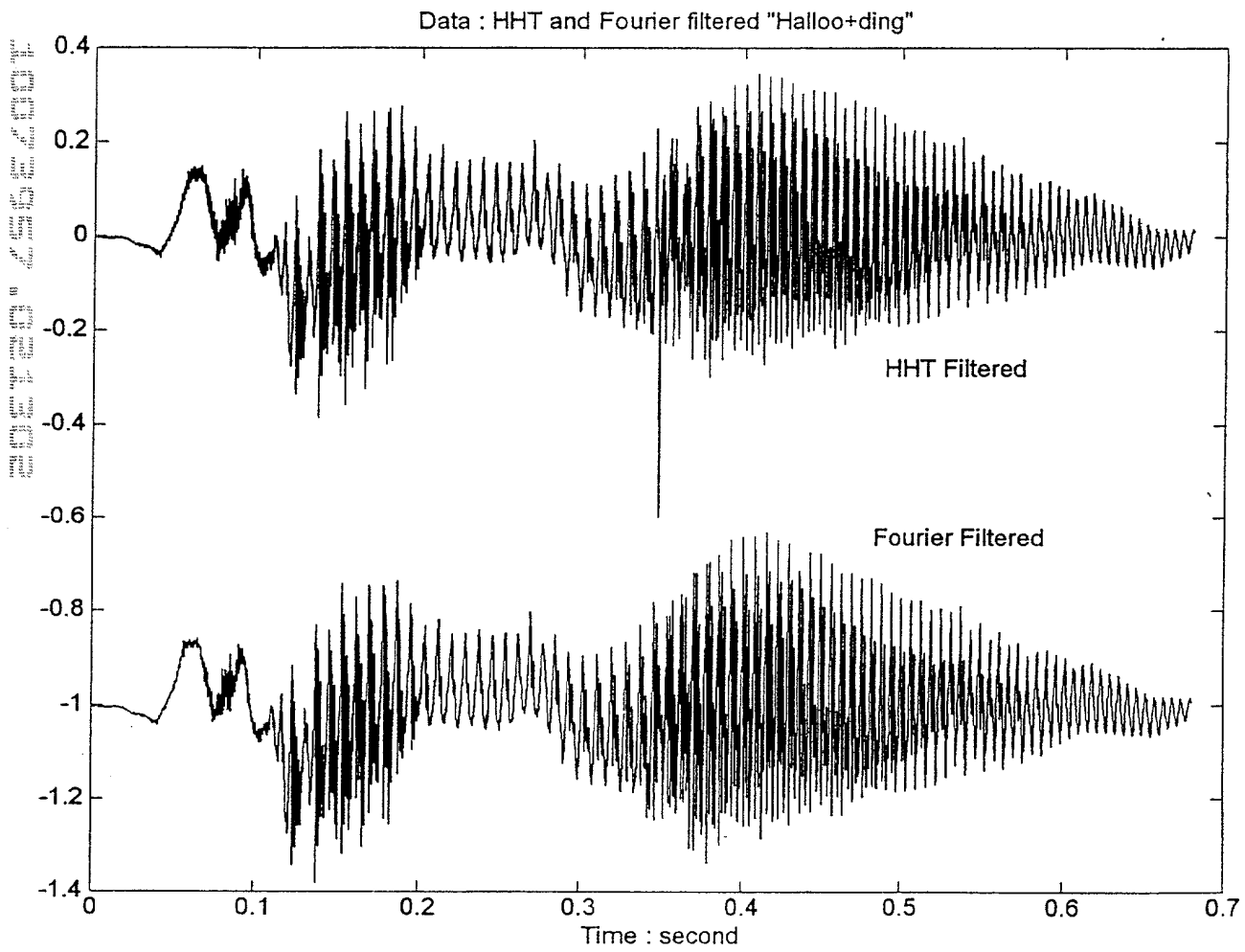


FIG. 59(b)

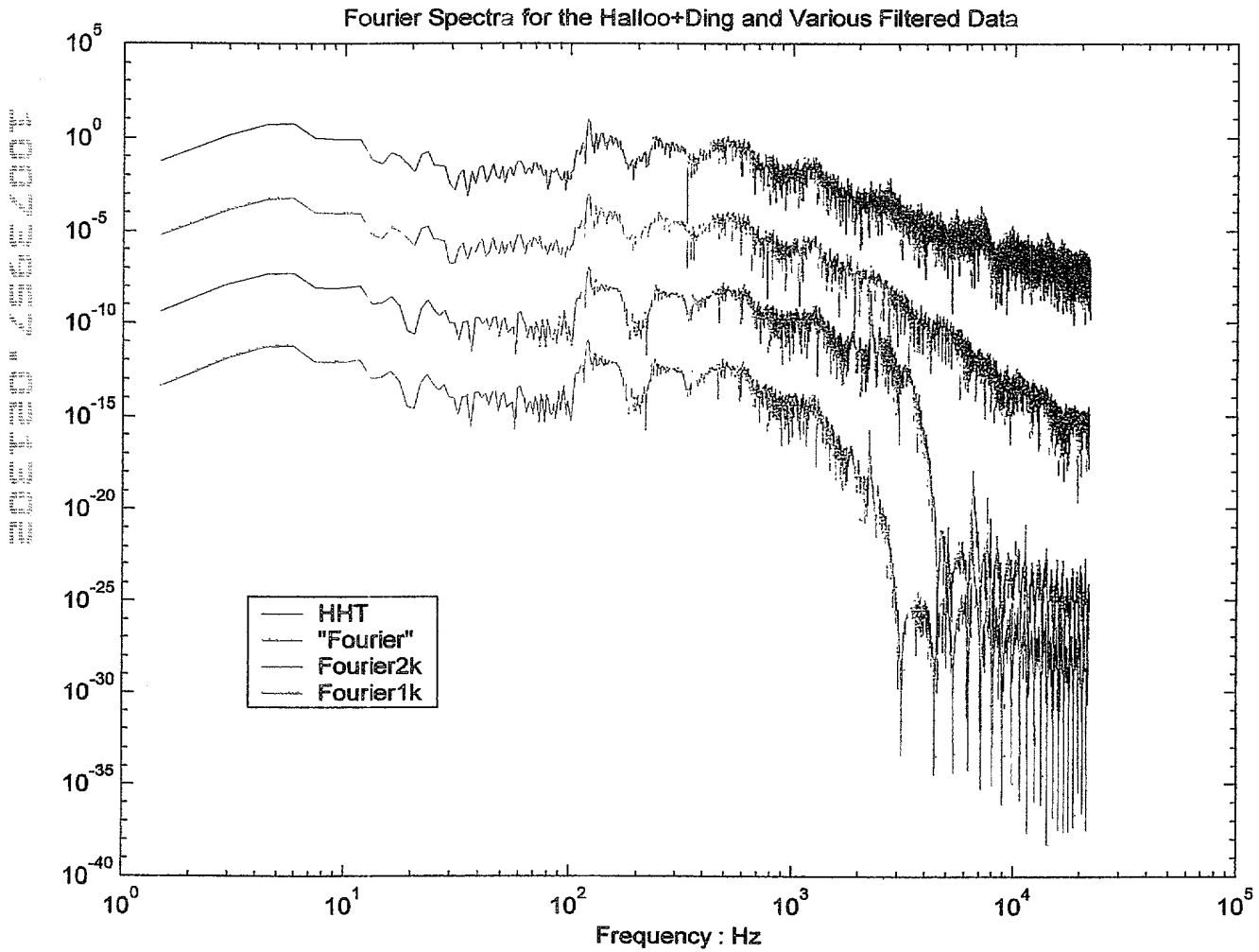


FIG. 60(a)

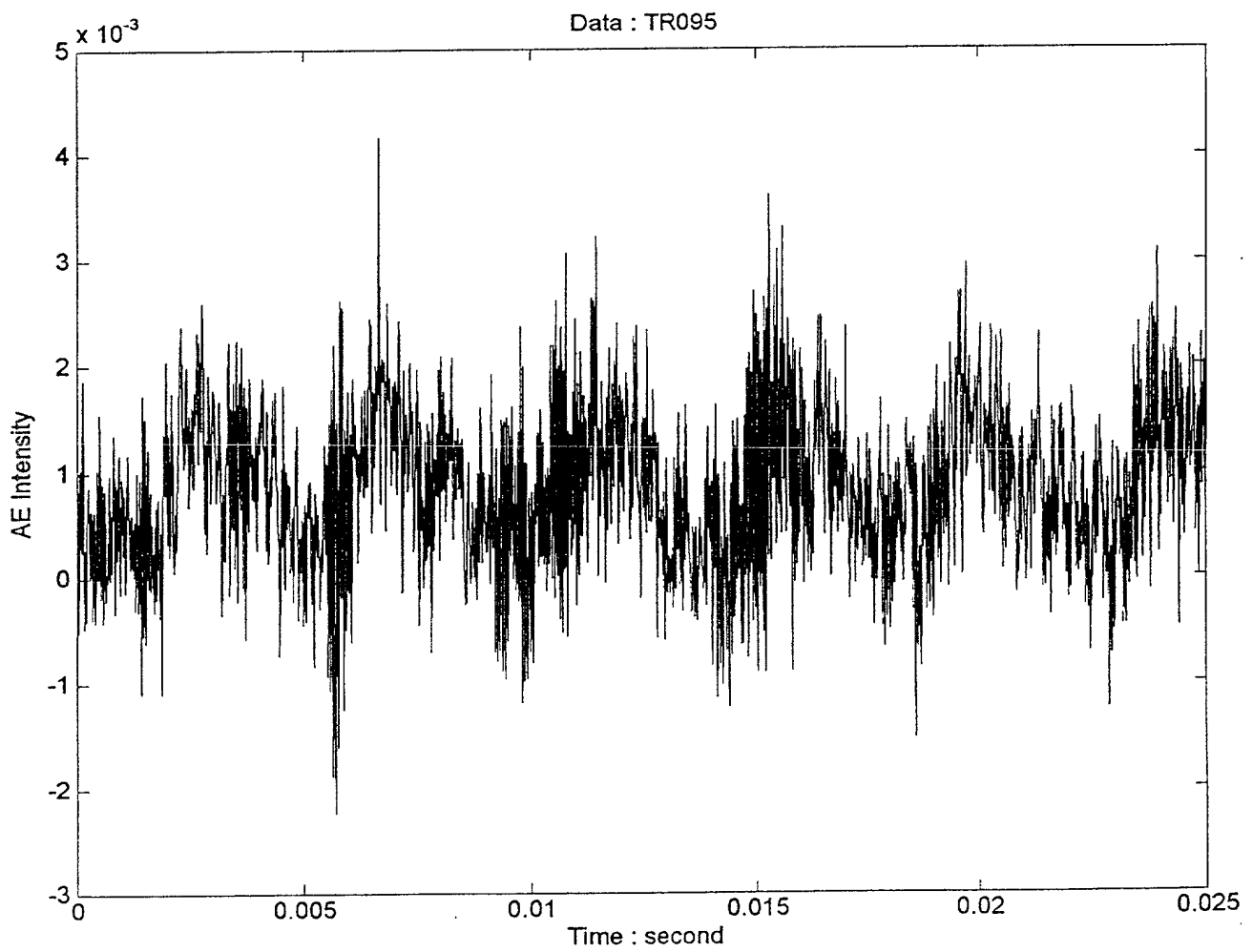


FIG. 60(b)

Data : TR120

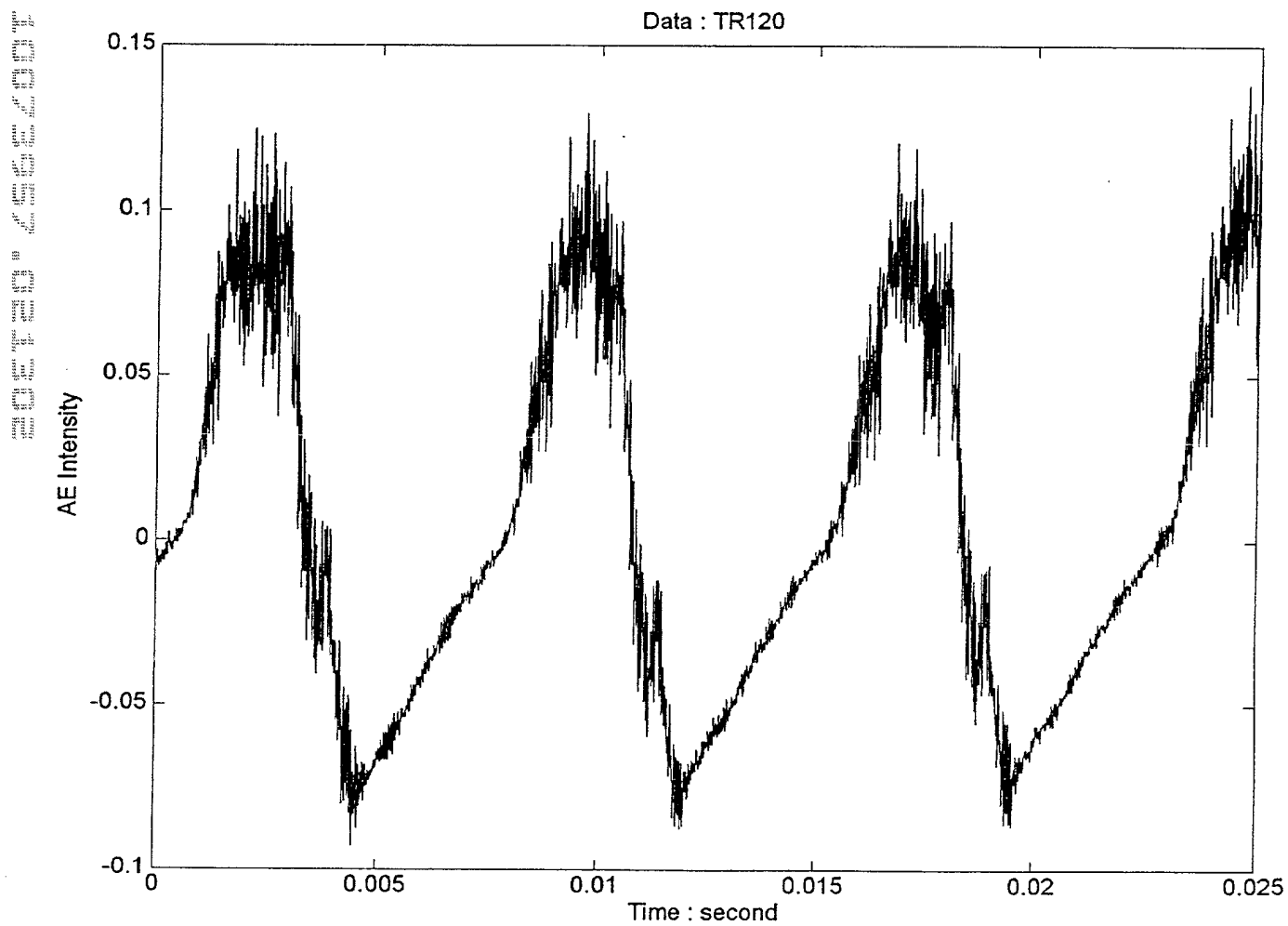


FIG. 60(c)

Data : TR200

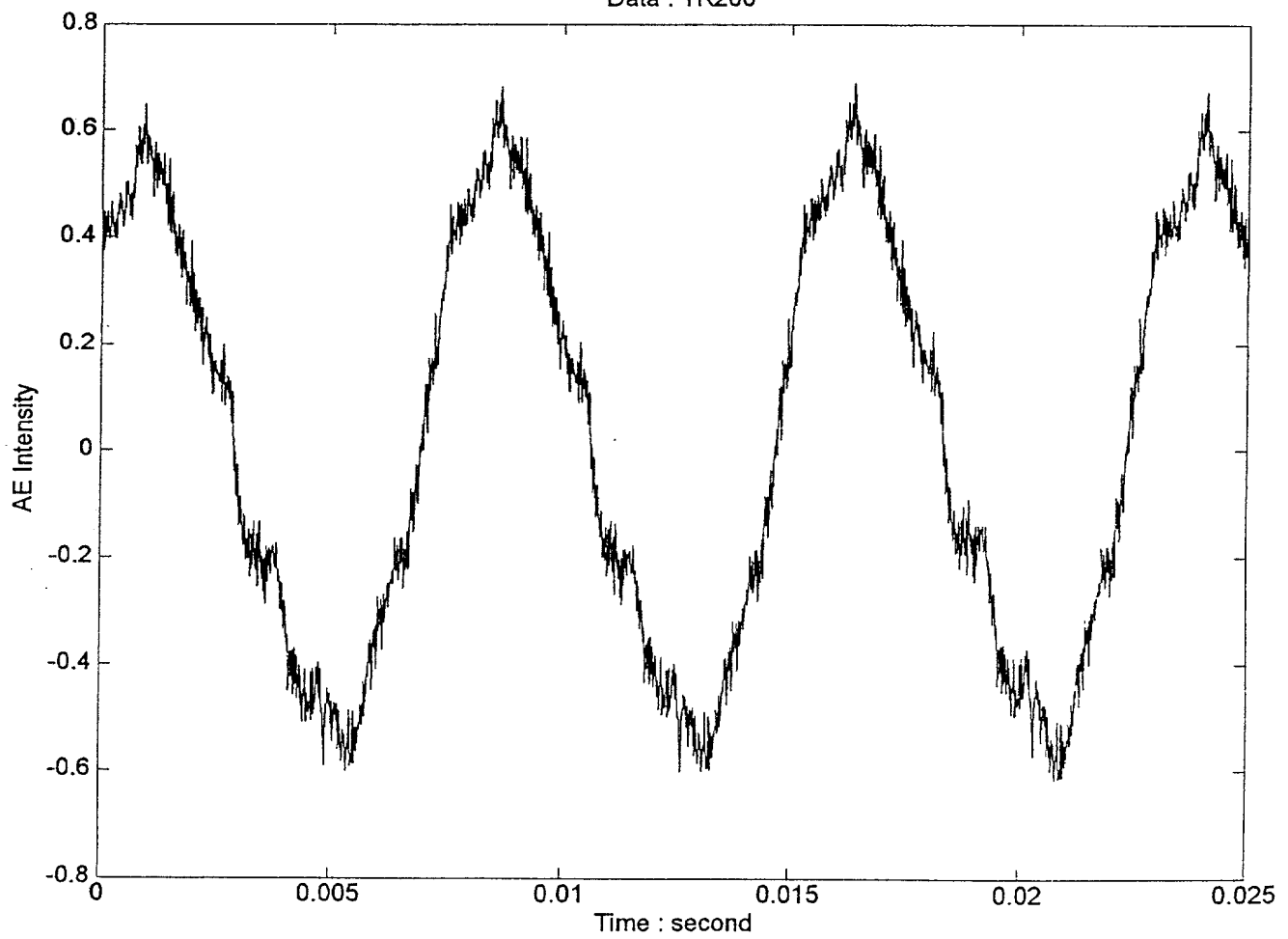


FIG. 61(a)

IMF TR095

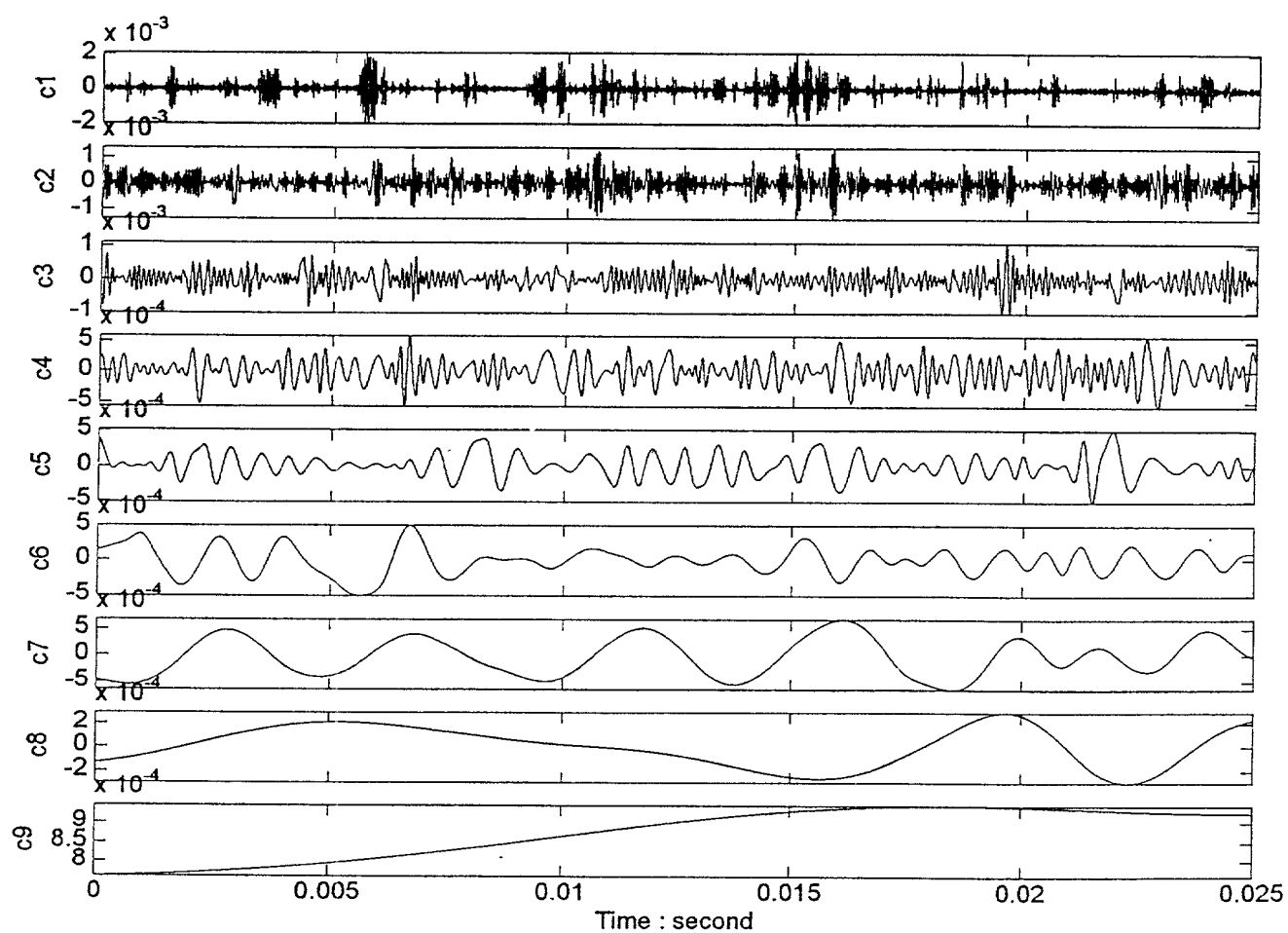


FIG. 61(b)

IMF TR120

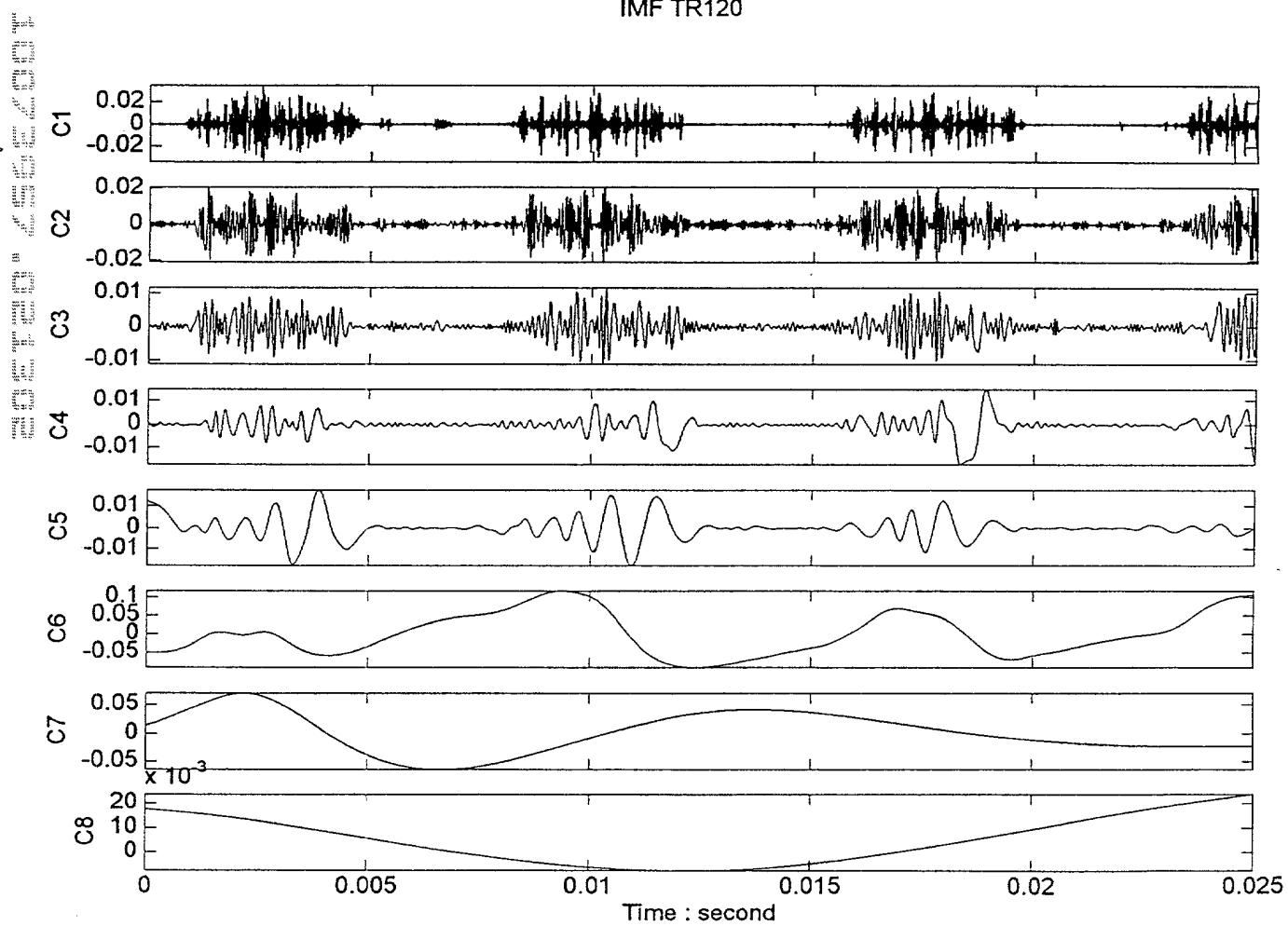


FIG. 61(c)

IMF TR200

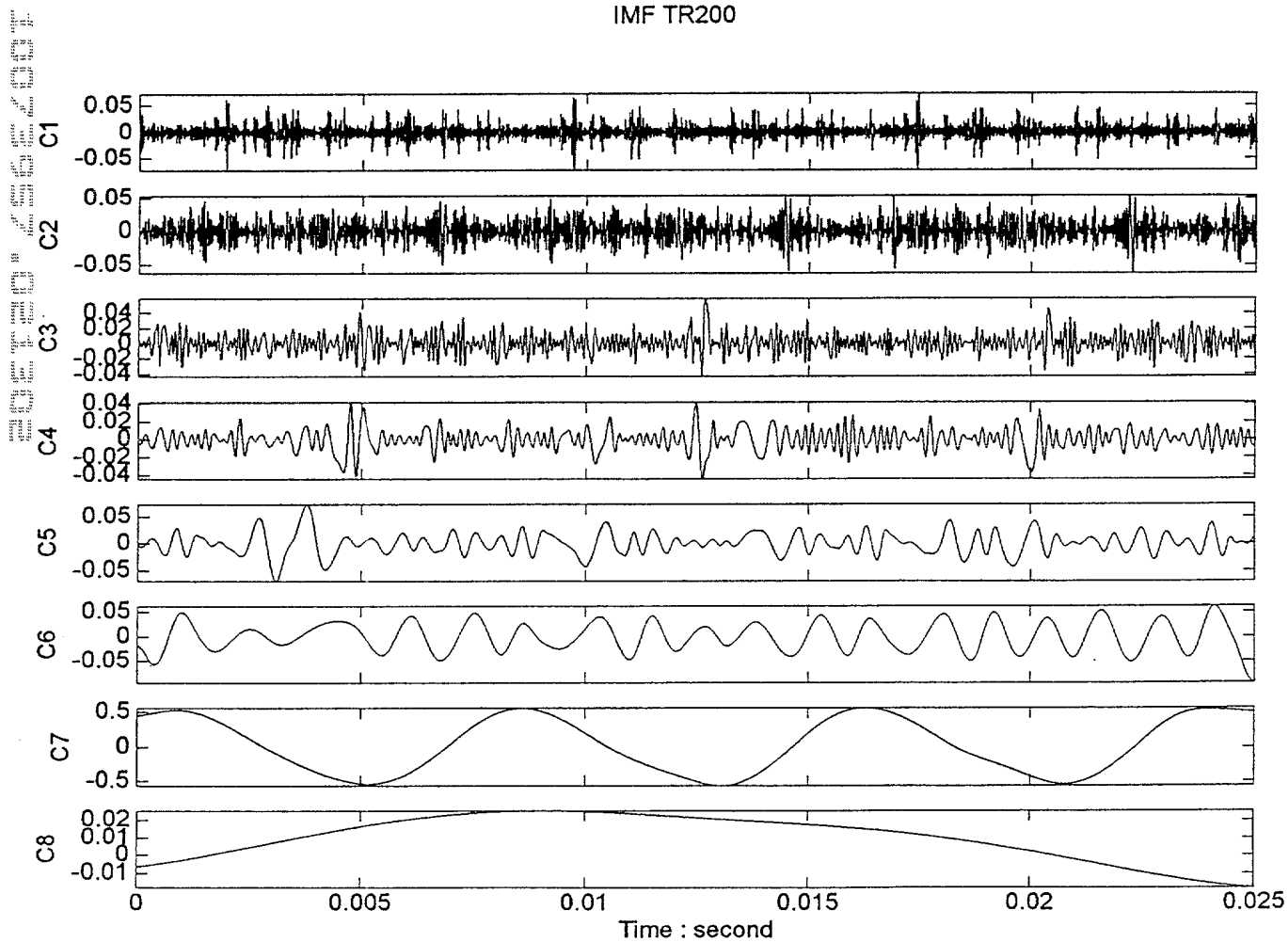


FIG. 62(a)

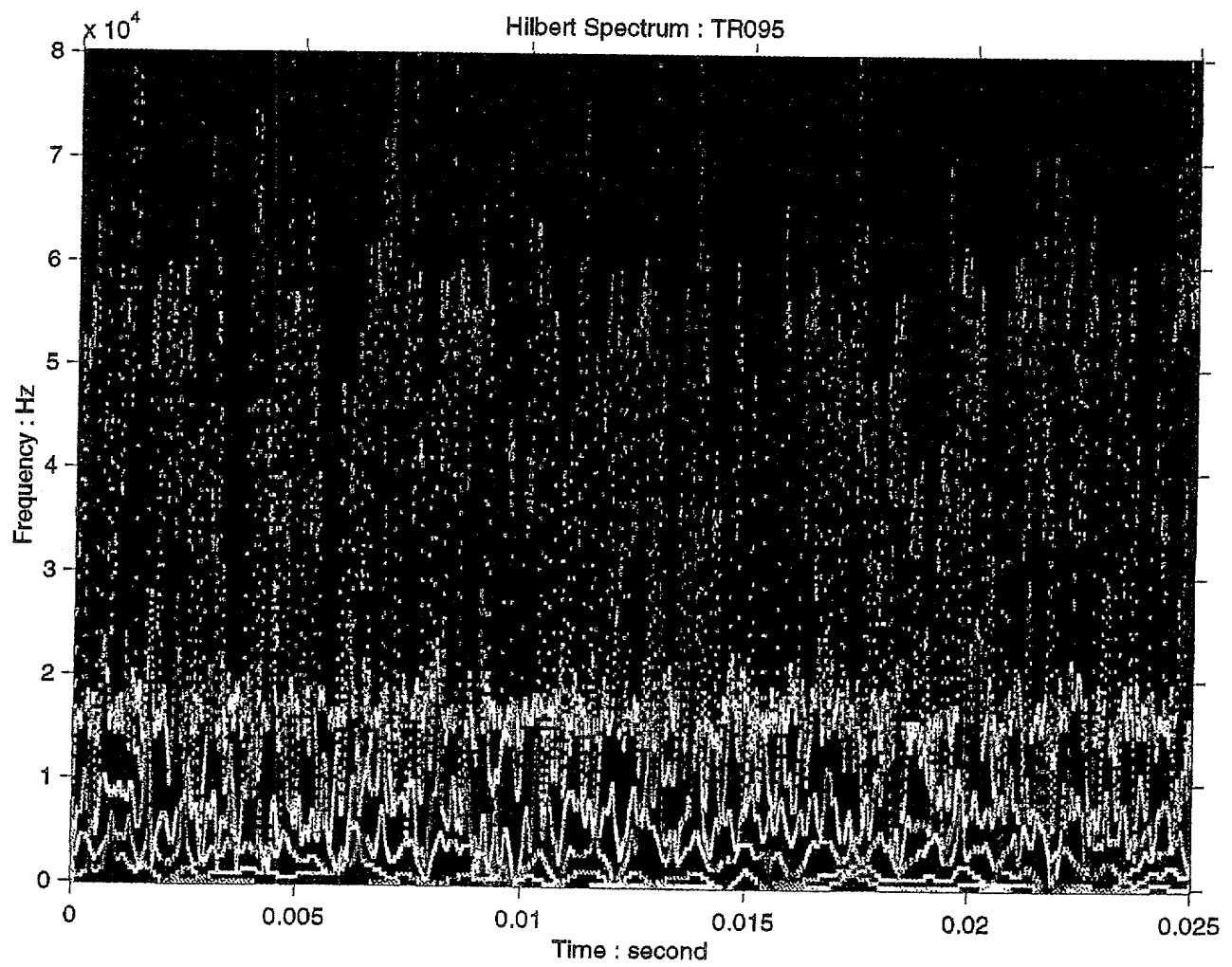


FIG. 62(b)

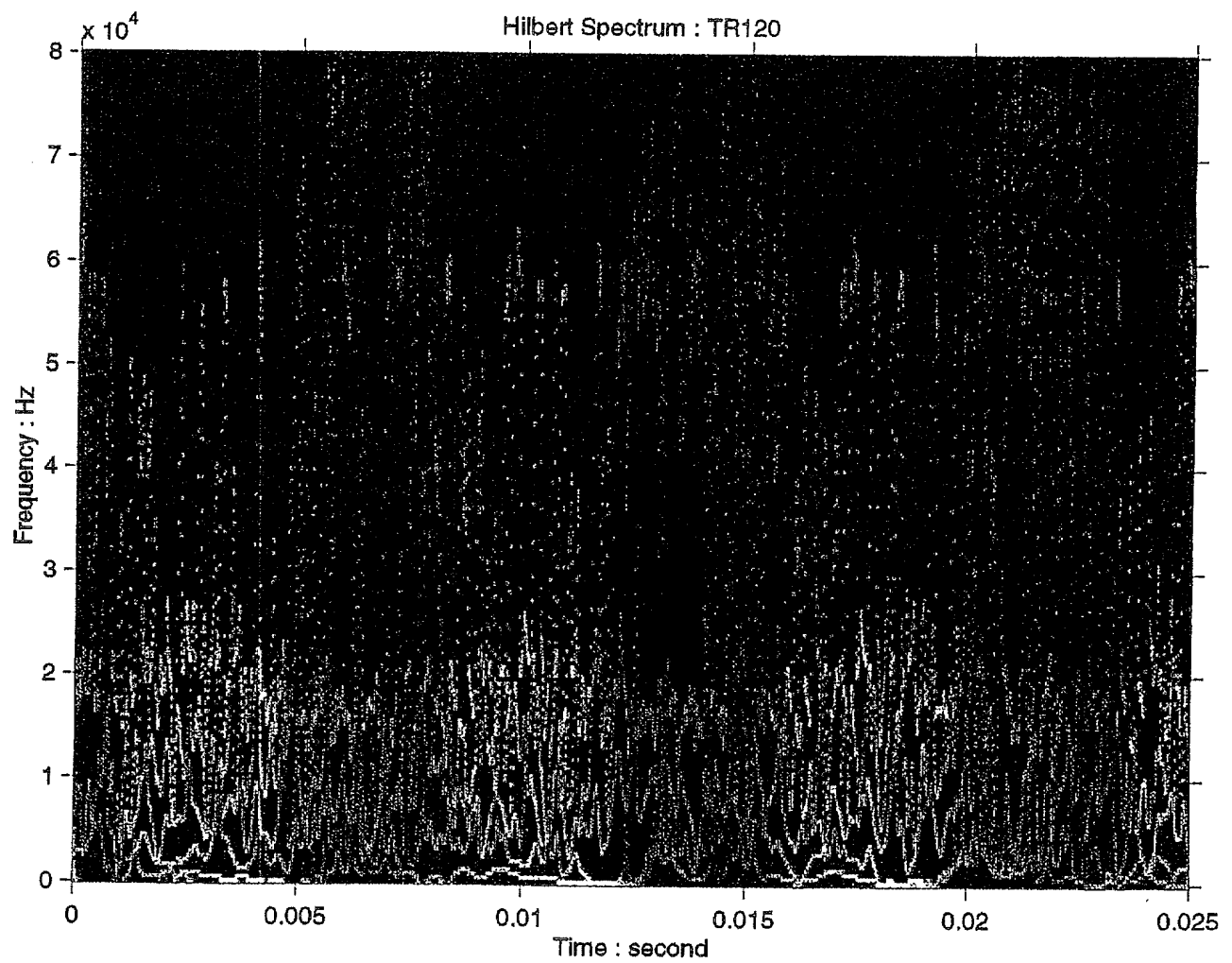


FIG. 62(c)

